

# MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL  
RAILROAD & FINANCIAL NEWSPAPER.

## GRAIN AT GULF PORTS.

[Railway World.]

Two Gulf ports—New Orleans and Galveston—for the eight months ending August, 1903, show a total increase in grain receipts equal to over 124 per cent. For the same period the increase of grain receipts at the four North Atlantic ports of Boston, New York, Philadelphia and Baltimore was a little over 20 per cent. Expressed in bushels, the two Gulf ports received 16,829,492 for the eight months ending August, 1902, and 37,702,626 for the corresponding eight months of the present year, an increase of 20,872,134 bushels. The four North Atlantic ports received 132,469,474 bushels for the eight months ending August, 1902, and 158,998,276 bushels for the corresponding period of 1903, an increase of 26,528,802 bushels. \* \* \* Nebraska and Kansas are also much closer to the Gulf of Mexico than to New York or Philadelphia. The wheat exports of this section naturally take the Southern route. The distance is shorter, the grades easier and the possibilities of return freight are larger than on the long haul to the Atlantic seaboard. From 1897 to 1901 the wheat exports of Galveston and New Orleans increased from 17.6 million to 40.1 million bushels, 41 per cent. of the total increase from the United States during this period. The Southern railroads have fostered this southward movement of grain by favorable rates and by enlarging their terminal facilities.

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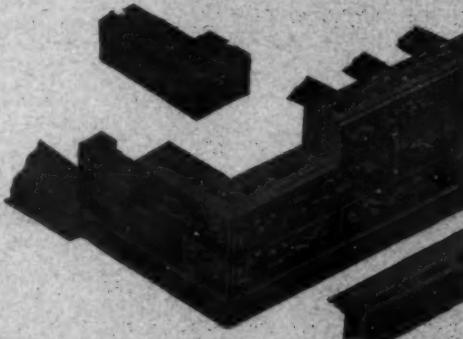
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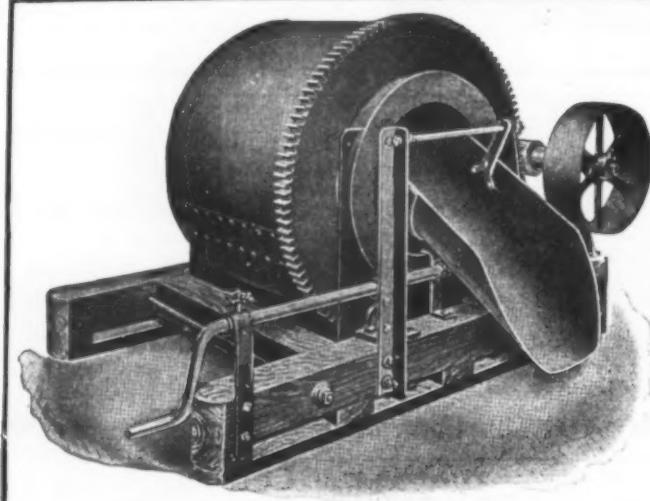
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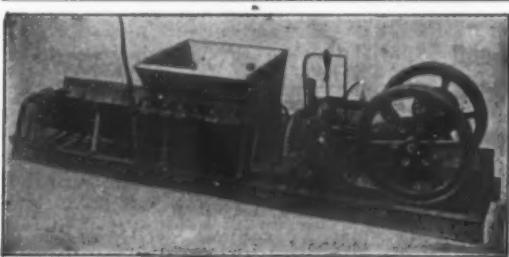
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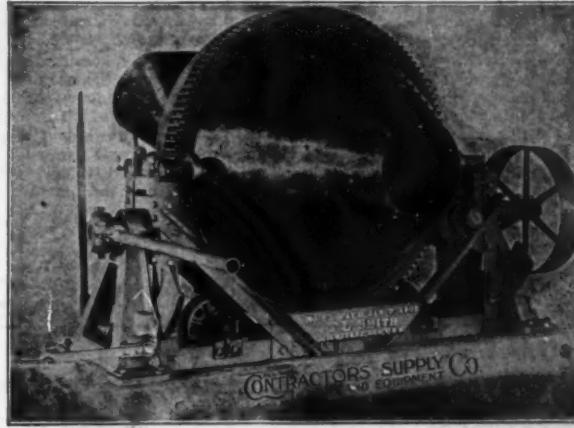
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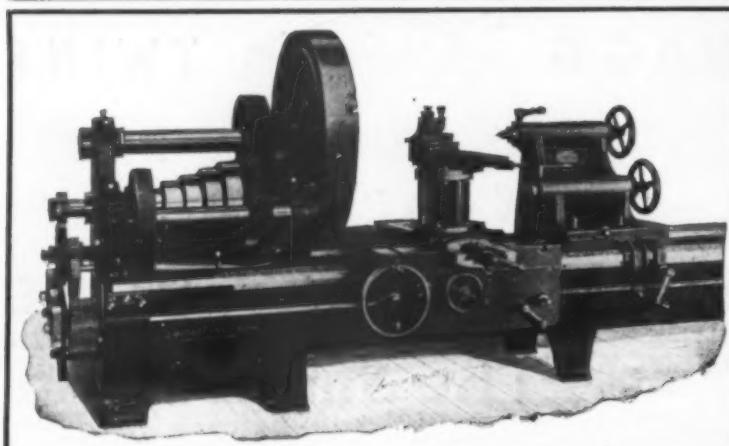
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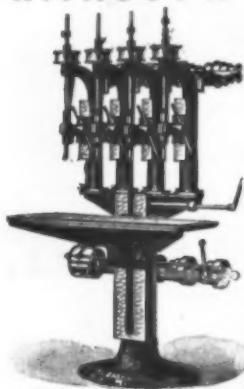


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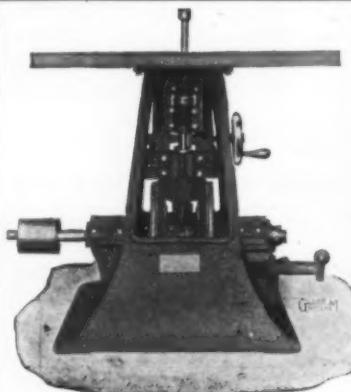
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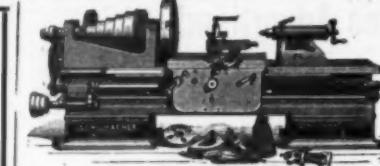


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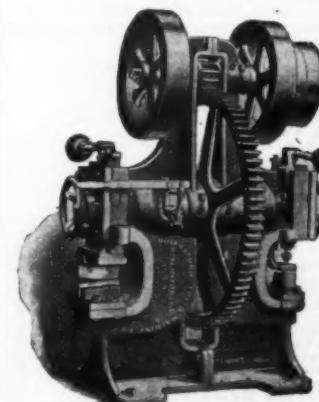
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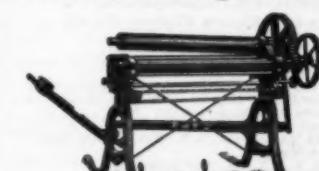
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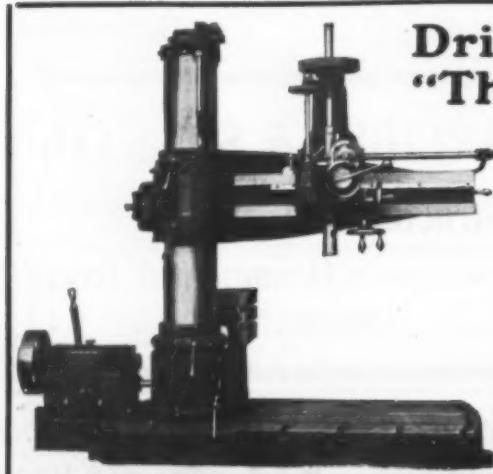
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Hiers, Theo., Metal Co., St. Louis, Mo.

Ryan &amp; Co., J. J., Chicago, Ill.

Buttons. (PATTERN.)

Burke, A. W., Seneca Falls, N. Y.

Lime.

Carolina Portland Cement Co., Charleston, S. C.

Kreigshaber, V. H., Atlanta, Ga.

Maryland Lime &amp; Cement Co., Balt., Md.

Southeastern Lime &amp; Cement Co., Charleston, S. C.

Warner, Charles Co., Wilmington, Del.

Locomotive Builders.

American Locomotive Co., New York, N. Y.

Baldwin Locomotive Works, Philadelphia, Pa.

Byers, J. N., Mcn. Co., Ravenna, O.

Climax Mfg. Co., Corry, Pa.

Loyd, Edg. S., Co., Pittsburgh, Pa.

Males Co., Cincinnati, O., Mobile, Ala.

Porter, H. K., Co., Pittsburgh, Pa.

Loom Harness.

American Supply Co., Providence, R. I.

Loom and Weaving Machinery.

American Supply Co., Providence, R. I.

Draper Co., Hopedale, Mass.

Fairmount Machine Co., Philadelphia, Pa.

Kilburn, Lincoln &amp; Co., Fall River, Mass.

Lowell Machine Shop, Boston, Mass.

Mason Machine Works, Taunton, Mass.

Tompkins, D. A., Co., Charlotte, N. C.

Lubricating Compound.

Galena Signal Oil Co., Galena, Pa.

Baldwin Wm. Co., Sons Co., Baltimore, Md.

Cook's, Adams, Sons, New York, N. Y.

Lubricators and Oil Cups.

Cook's, Adams, New York, N. Y.

Crosby Steam Gage &amp; Valve Co., Boston, Mass.

Detroit Lubricator Co., Detroit, Mich.

Lunkenheimer Co., Cincinnati, O.

Penberthy Injector Co., Detroit, Mich.

Lumber.

Kirby Lumber Co., Houston, Tex.

Montgomery Lumber Mfg. Co., Montgomery, Ala.

Price &amp; Head, Baltimore, Md.

Red Cypress Lumber Co., Macon, Ga.

Sutton Lumber Co., Macon, Ga.

Williams, W. S., Lumber Co., Mobile, Ala.

Machine. (speciaL.)

Eclipse Mch. Co., Chicago, Ill.

Leffler, Charles, &amp; Co., Brooklyn, N. Y.

Moshanow Mfg. Co., Philadelphia, Pa.

Pennsylvania Iron Works, Philadelphia, Pa.

Hoyersford Foundry &amp; Machine Co., Hoyersford, Pa.

Machinery Bargains. (NEW &amp; SEC. HAND.)

Affleck, Geo. E., New York, N. Y.

American, Chicago, Ill.

American Elec. Supply &amp; Mfg. Co., New York, N. Y.

Armstrong, R. S. &amp; Bro., Atlanta, Ga.

Baker, H. C., Co., Philadelphia, Pa.

Bennett, G. L., New York, N. Y.

Booth, F. &amp; Son, Birmingham, Pa.

Boysen &amp; Street Equitable Co., Norfolk, Va.

Braden, Jas. S., New York, N. Y.

Brown &amp; Trottman Machinery Co., Pittsburgh, Pa.

Caine &amp; Pitts, Philadelphia, Pa.

Carlin Mch. &amp; Supply Co., Allegheny, Pa.

Casey, D. L., Mch. Co., Springfield, O.

Chicago House Wrecking Co., Chicago, Ill.

Cleveland Belting &amp; Machinery Co., Cleveland, O.

Clyde Mch. Works, Chicago, Ill.

Columbia Supply Co., Columbia, S. C.

Columbus Iron &amp; Steel Co., Columbus, O.

Contractors' Equipment Co., Philadelphia, Pa.

Contractors' Supply Co., Pittsburgh, Pa.

Contractors' Supply &amp; Equipment Co., Chicago, Ill.

Cook, Justice, &amp; Co., Philadelphia, Pa.

Driscoll, John T., Co., Chicago, Ill.

Fidelity Machine &amp; Metal Co., Philadelphia, Pa.

Gavin Machine Co., New York, N. Y.

Hartfelder-Garbuti Co., Savannah, Ga.

Hiltner's, H. A., Sons, Philadelphia, Pa.

Huntington Machinery &amp; Supply Co., Wilkes-Barre, Pa.

Kaiser, A. V. &amp; Co., Philadelphia, Pa.

Kennedy, L. E. &amp; Co., New York, N. Y.

Kohn, J. W. &amp; Co., Cleveland, O.

Lehman, Charles T., Birmingham, Ala.

Lodge &amp; Shipley Mch. Tool Co., Cincinnati, O.

Lund, J. C., New York, N. Y.

Lucas, J. C., Baltimore, Md.

Mallory, J. D., Co., Baltimore, Md.

Mengel's Machinery Exchange, Baltimore, Md.

Foullard &amp; Co., Philadelphia, Pa.

Price Machinery Co., Chicago, Ill.

Rosenthal, MacIver &amp; Co., New York, N. Y.

Samuel, Frank, Philadelphia, Pa.

Saxton, J. C., New York, N. Y.

Seydel's, L. F., Sons, Philadelphia, Pa.

Shaw, Willis, Chicago, Ill.

Stewart, John A., Electric Co., Cincinnati, O.

Straub Machinery Co., Cincinnati, O.

Thompson, Son &amp; Co., New York, N. Y.

## MANUFACTURERS' RECORD.

For ALPHABETICAL INDEX See Page 32.

## Classified Index of Articles Advertised

For ALPHABETICAL INDEX See Page 32.

For



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**Genuine**  
**Bangor**  
**Roofing**  
**SLATE**

Direct from the

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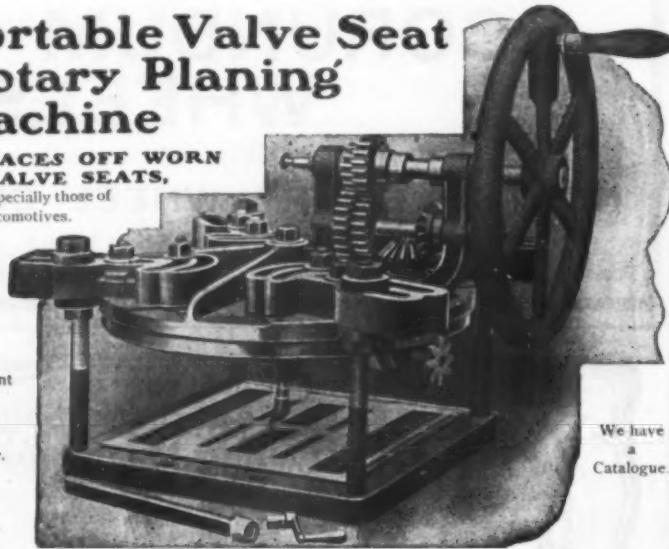
**GENUINE BANGOR SLATE**  
**COMPANY,**

EASTON,

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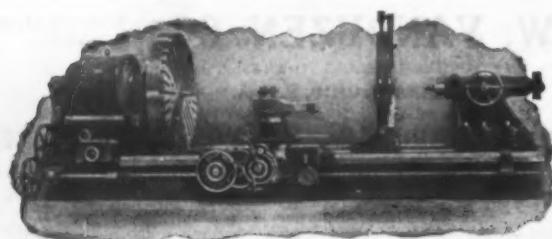
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 especially those of  
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Each machine is furnished with sample cutting tool, wrenches and hand fly-wheel.

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Counterbores are furnished either singly or in sets, consisting of one counterbore for head of screw with guide of body size, one counterbore for head with guide of tap drill size, and one counterbore to enlarge a tap drill hole to body size.

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General Office, 25 Broad St., NEW YORK CITY.

BUILDERS OF  
**Locomotives**

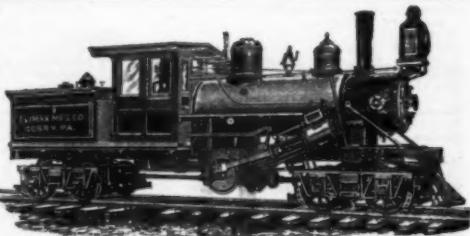
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 Pittsburgh Works, Allegheny, Pa.  
 Richmond Works, Richmond, Va.

Cooke Works, Paterson, N. J.  
 Rhode Island Works, Providence, R. I.  
 Dickson Works, Scranton, Pa.  
 Manchester Works, Manchester, N. H.

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 Weinman Machine Co.

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 Write us for Quotations.

## Classified Index of Articles Advertised

FOR ALPHABETICAL INDEX See Page 32

Chattanooga Paint Co., Chattanooga, Tenn.  
Detroit Graphite Co., Detroit, Mich.  
Dixon Crucible Co., Joseph, Jersey City, N. J.  
Eastern Granite Roofing Co., New York, N. Y.  
French, Samuel H., Co., Philadelphia, Pa.  
Ironworks Co., Columbus, O.  
Simmons, John, Co., New York, N. Y.  
Standard Paint Co., New York, N. Y.  
Wisconsin Graphite Co., Pittsburgh, Pa.

**Paper.** (Bleaching, Building, Sheathing, etc.)  
Armitage Mfg. Co., The, Richmond, Va.  
Barrett Mfg. Co., Philadelphia, Pa.  
Buchanan-Foster Co., Philadelphia, Pa.  
Eastern Granite Roofing Co., New York, N. Y.  
Garrett, C. S., & Son, Co., Philadelphia, Pa.  
National Roofing & Supply Co., Louisville, Ky.  
Standard Paint Co., The, New York, N. Y.

**Paper.** (Sand, Emery.)  
Bassett, Adams & Co., Philadelphia, Pa.

**Parquetry.**  
Adams, J. M., Baltimore, Md.

**Paste.** (Graphite Pipe Joint.)  
Wisconsin Graphite Co., Pittsburgh, Pa.

**Pattern Makers' Machinery.**  
Fay, J. A., & Egan, Cincinnati, O.

**Patterns.** (Metal.)  
Richmond Pattern Works, Richmond, Va.  
Ryan, J. J., & Co., Chicago, Ill.

**Patterns.** (Wooden.)  
Richmond Pattern Works, Richmond, Va.

**Paving Material.**  
Barrett Mfg. Co., Philadelphia, Pa.

National Roofing & Supply Co., Louisville, Ky.

**Perforated Metal.**

Aitchison Perforated Metal Co., Robert, Chicago, Ill.

Beckley, A. J., Co., Garwood, N. J.

Caldwell, H. W., & Son Co., Chicago, Ill.

Harrington & King Perforated Co., Chicago, Ill.

Hendrick Mfg. Co., The, Ltd., Carbondale, Pa.

Ludlow-Saylor Wire Co., The, St. Louis, Mo.

Mundi, Charles, & Sons, New York, N. Y.

Stimpson, R. B., & Son, New York, N. Y.

**Petroleum.** (FUEL.)  
Gulf Refining Co., Pittsburgh, Pa.

**Petroleum Machinery.**

Bullock, Leiby, & Tarr, Chicago, S. C.

Bradley Pulverizer Co., Boston, Mass.

Cameron & Barkley Co., Charleston, S. C.

Creson Co., Gee, V., New York, N. Y.

Foot Mfg. Co., Springfield, O.

Kent Mill Co., New York, N. Y.

Link-Belt Engineering Co., Philadelphia, Pa.

McLanahan-Stone Machine Co., Hellscampasburg, Pa.

Raymond Bros. Impact Pulverizer Co., Chicago, Ill.

Simpson, J. S., & G. F., Brooklyn, N. Y.

Smith & Co., F. L., Co., New York, N. Y.

Tompkins, D. A., Co., Charlotte, N. C.

Valk & Munroch Iron Works, Charleston, S. C.

Walker & Elliott, Wilmington, Del.

**Phosphor Bronze.** (Wire, Rods, Sheets.)

Ryan, J. J., Co., Chicago, Ill.

Phosphor Bronze Smelting Co., Ltd., Philadelphia, Pa.

Van Duzen, E. W., Co., Cincinnati, O.

**Pianos and Organs.**

Steff, Charles M., Baltimore, Md.

**Pig Iron.**

Alabama Con. Coal & Iron Co., Birmingham, Ala.

Burns-Fuller Co., Cleveland, O.

**Piling.**

International Croceting & Const. Co., Galveston, Tex.

West Pascoa Croceting Wks., W. Pascoa, Miss.

**Pillow Blocks.**

Caldwell, W. E., Co., Louisville, Ky.

Creson, Gee, V., New York, N. Y.

Golden's Foundry & Machine Co., Columbus, Ga.

Kesey Pulley Co., Toledo, O.

**Pine Products.**

Standard Turpentine Co., New York, N. Y.

**Pipe.** (Brass and Copper.)

Waterbury Brass Co., New York, N. Y.

**Pipe.** (Cast Iron.)

Diamond Pipe Co., Birmingham, Ala.

General Fire Extinguisher Co., Providence, R. I.

Glamorgan Pipe & Foundry Co., Lynchburg, Va.

Moore, Edgar L., & Co., Pittsburgh, Pa.

U. S. Pipe & Foundry Co., Chattanooga, Tenn.

Wood, R. D., & Co., Philadelphia, Pa.

**Pipe.** (Copper.)

National Pipe Bending Co., New Haven, Conn.

Wolf Co., Fred W., Chicago, Ill.

**Pipe.** (Lead.)

Robertson Mfg. Co., James, Baltimore, Md.

**Pipe.** (Riveted.)

American Spiral Pipe Works, Chicago, Ill.

Girard Boiler & Mfg. Co., Girard, O.

Keeler, E., Co., Williamsport, Pa.

Petroleum Iron Works Co., Washington, Pa.

**Pipe.** (Sewer and Culvert.)

Georgia Vitrified Brick & Clay Co., Augusta, Ga.

Kriegsaher, V. H., Atlanta, Ga.

Maryland Lime & Cement Co., Baltimore, Md.

Pomona's Sons Co., H. M., Mass.

Tallarday Steel Pipe & Tank Co., Waterloo, Ia.

Warren Co., Chas., Wilmington, Del.

**Pipe.** (Sheet Steel.)

Dixie Mfg. Co., Baltimore, Md.

Tallarday Steel Pipe & Tank Co., Waterloo, Ia.

**Pipe.** (Spiral Riveted.)

American Spiral Pipe Works, Chicago, Ill.

**Pipe.** (Wrought Iron.)

Burns-Fuller Co., Cleveland, O.

Columbia Supply Co., Columbia, S. C.

General Fire Extinguisher Co., Providence, R. I.

Simmons, John, Co., New York, N. Y.

Wolf Co., Fred W., Chicago, Ill.

**Pipe Cutting and Threading Mach.**

Reed Mfg. Co., Erie, Pa.

Saunders' Sons, D., Yonkers, N. Y.

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Columbia Supply Co., Columbia, S. C.

General Fire Extinguisher Co., Providence, R. I.

Robertson Mfg. Co., James, Baltimore, Md.

Simmons, John, Co., New York, N. Y.

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Caldwell, H. W., & Son Co., Chicago, Ill.

Camp Mfg. Co., Columbus, O.

Creson, Co., Geo. V., New York, N. Y.

Fairmount Machine Co., Philadelphia, Pa.

Kesey Pulley Co., Toledo, O.

Link-Belt Engineering Co., Philadelphia, Pa.

Miller Machine Co., Minister, O.

Northern Electric Co., Milwaukee, Wis.

North, W. M., Co., Indianapolis, Ind.

Wood's T. B., Sons, Chambersburg, Pa.

**Presses.** (Bailing, Cottonseed Oil, etc., Hydraulics and Power.)

Bonner & Boscawen Press Co., Syracuse, N. Y.

Bushnell Press Co., G. H., Thompsonville, Conn.

Caldwell Machine Co., Richmond, Va.

Gibbs, W. H., & Co., Columbia, S. C.

Tompkins, D. A., Co., Charlotte, N. C.

Valk & Murdoch Iron Works, Charleston, S. C.

Watson-Silliman Co., New York, N. Y.

**Presses.** (Stamping.)

Leffler, Chas., & Co., Brooklyn, N. Y.

Nichols & Co., Tool Works, Buffalo, N. Y.

**Publishers.**

Audel, Theo., & Co., New York, N. Y.

Middleton, J. W., & Co., Chicago, Ill.

**Pulleys.** (Friction Clutch.)

Blakeslee Mfg. Co., Birmingham, Ala.

Brown, A. & F., Co., New York, N. Y.

Creson Co., Geo. V., New York, N. Y.

Fairmount Machine Co., Philadelphia, Pa.

Smith, S. Moran, Co., York, Pa.

Williams, M. F., Mfg. Co., St. Louis, Mo.

Wood, E. S., Sons, Chambersburg, Pa.

**Pulleys.** (Pneumatic.)

Williams, F. M., Co., St. Louis, Mo.

**Pulleys.** (Wood Split.)

Caldwell, H. W., & Son Co., Chicago, Ill.

Caldwell, H. W., Co., Louisville, Ky.

Chase Pulley Co., Providence, R. I.

Federal Mfg. Co., Milwaukee, Wis.

Kesey Pulley Co., Toledo, O.

Lane Mfg. Co., Montpelier, Vt.

Onida Steel Pulley Co., Oneida, N. Y.

Price, S. M., Machinery Co., Norfolk, Va.

Smith, H. E., Machine Co., Smithville, N. J.

Smith, H. E., Machine Co., Smithville, N. J.

Watson-Silliman Co., New York, N. Y.

**Pulleys.** (Steel Split.)

American Pulley Co., Philadelphia, Pa.

Federal Mfg. Co., Milwaukee, Wis.

Onida Steel Pulley Co., Onida, N. Y.

**Pulleys.** (Shafting and Hangers.)

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Caldwell, H. W., & Son Co., Chicago, Ill.

Camp Mfg. Co., Columbus, O.

Creson Co., Geo. V., New York, N. Y.

Fairmount Machine Co., Philadelphia, Pa.

Price, S. M., Machinery Co., Norfolk, Va.

Schoedels, J. H., Sons Co., Macon, Ga.

Smith, H. E., Machine Co., Smithville, N. J.

Tompkins, D. A., Co., Charlotte, N. C.

Valley Iron Works, Williamsport, Pa.

Wolf Co., Chambersburg, Pa.

Woods, T. B., Sons, Chambersburg, Pa.

**Pumps.** (Hot Air.)

American Machine Co., Wilmington, Del.

Erie Pump & Engine Co., Erie, Pa.

Southwick Foundry & Machine Co., Philadelphia, Pa.

Wood, R. D., Philadelphia, Pa.

**Pumps.** (Hydraulic.)

American Steam Pump Co., Battle Creek, Mich.

Cardwell Machine Co., Richmond, Va.

Niagara Hydraulic Engine Co., Chester, Pa.

Watson-Silliman Co., New York, N. Y.

**Pumps.** (Pneumatic.)

Bacon Air Lift Co., New York, N. Y.

Consolidated Air Lift Co., Washington, D. C.

Ingersoll-Sergeant Drill Co., New York, N. Y.

McCormick, A. S., Steam Pump Works, New York, N. Y.

Cook Well Co., The, St. Louis, Mo.

Eric Foss & Eng. Co., Erie, Pa.

Myers, F. E., & Co., Ashland, O.

Sillwell-Biers & Smith Valve Co., Dayton, O.

Walks, Henry, Co., Norfolk, Va.

Wood, R. D., & Co., Philadelphia, Pa.

Worthington, Henry H., New York, N. Y.

**Punching and Shearing Machinery.**

Berisch & Co., Cambridge City, Ind.

Niagara Machine & Tool Works, Buffalo, N. Y.

Robinson, J. M., Mfg. Co., Cincinnati, O.

Boydell Foundry & Machine Co., Boydell, Pa.

Wood, R. D., & Co., Philadelphia, Pa.

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Circular 1050



Direct Current  
Circular 1042

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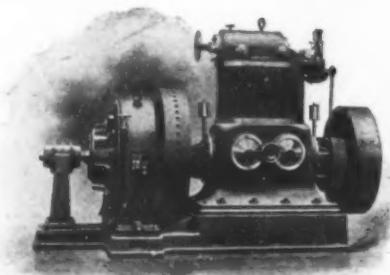
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35 H. P. to 450 H. P.



Westinghouse Compound Engine Generating Set.

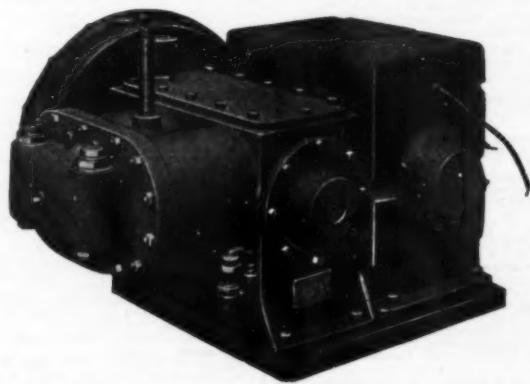
The duty tests given each engine before shipment, can be relied upon as a true indication of future performance.

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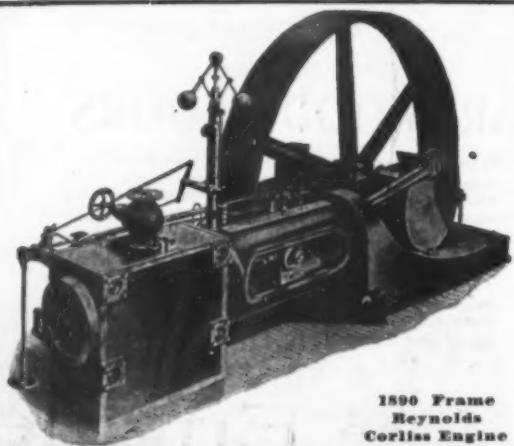


Specially adaptable to furnishing compressed air for portable blowing outfits; the latter are furnished in three sizes, with or without truck and storage tanks, and with or without water jacket.

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Power Brakes for Traction Service.  
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FOR ALL POWER PURPOSES.

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Worham-Major Engine Works, New York, N. Y.  
Zellicker, W. A., Supply Co., St. Louis, Mo.  
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Alabama Frog & Switch Co., Anniston, Ala.  
American Frog & Switch Co., Hamilton, O.  
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Koppel, Arthur, New York City.  
May & Spalding, Atlanta, Ga.  
Weir Frog Co., Cincinnati, O.  
Worham-Major Eng. Works, New York, N. Y.  
Zellicker, W. A., Supply Co., St. Louis, Mo.  
**Rails.** (Steel.)  
Bourne-Fuller Co., Cleveland, O.  
Carey, George H., New York, N. Y.  
Clark & Hines, Baltimore, Md.  
Continental Equipment Co., New York, N. Y.  
Continental Iron & Steel Co., New York, N. Y.  
Davis, O. W., New York, N. Y.  
Frank, J. E., Savannah, Ga.  
Hamel, Joe, J., & Co., Pittsburgh, Pa.  
Hillman, H. A., Sons, Philadelphia, Pa.  
Johnson, W. C., New York, N. Y.  
Koppel, Arthur, New York, N. Y.  
Letts, Henry & Co., Philadelphia, Pa.  
Maclear, J. H., & Co., Suffolk, Va.  
Mahan Co., Cincinnati, O.  
Marvin Hall Co., Cumberland, Md.  
Moore, Edgar M., & Co., Pittsburgh, Pa.  
McKersie & Co., Inc., Pittsburgh, Pa.  
Robinson & Orr, Pittsburgh, Pa.  
Rutter, C. H., Easton, Pa.  
Schonthal Iron & Steel Co., Cumberland, Md.  
Simpson, Thos. W., & Co., Philadelphia, Pa.  
Steel Ball Supply Co., The, New York, N. Y.  
Union Hall Co., Pittsburgh, Pa.  
Western Supply & Mfg. Co., East St. Louis, Ill.  
Worham-Major Eng. Works, New York, N. Y.  
Zellicker, W. A., Supply Co., St. Louis, Mo.  
**Reamers.**  
Morse Twist Drill & Machine Co., New Bedford, Mass.  
Pratt & Whitney Co., Hartford, Conn.  
Polt, A. J., & Son, Millersburg, Pa.  
**Regulators.** (Water and Steam Pressure.)  
Crosby Steam Gage & Valve Co., Boston, Mass.  
**Repairs.** (Engine & Pump.)  
Underwood, H. A., & Co., Philadelphia, Pa.  
**Repairs.** (Marine, STEAMSHIP and LOCOMOTIVE.)  
Alabama Iron Works, Mobile, O.  
**Riveters.** (Pneumatic.)  
New Drill Co., New York, N. Y.  
**Road Machinery.**  
Acme Road Machinery Co., Frankfort, N. Y.  
Kelly-Springfield Road Roller Co., Springfield, O.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.  
**Rock Crushers.**  
Austin Mfg. Co., Chicago, Ill.  
Cresson, Geo. V., Co., New York, N. Y.  
Kent Mill Co., New York, N. Y.  
N. J. Laundry Machinery Co., New York, N. Y.  
**Roofing and Tin Roof Supplies.**  
Chattanooga Roof & Fdry. Co., Chattanooga, Tenn.  
Niagara Machine Tool Works, Buffalo, N. Y.  
Niagara & Jacobs Mfg. Co., Cincinnati, O.  
**Roofing Tin.** (See Tin Roofing.)  
**Roofing.** (Felt, Tar, Asphalt, Paper, etc.)  
American Roofing Co., Mobile, Ala.  
American Tinplate Co., Pittsburgh, Pa.  
Armitage Mfg. Co., The, Richmond, Va.  
Asphalt Ready Roofing Co., New York, N. Y.  
Barrett Mfg. Co., Philadelphia, Pa.  
Boutwell, F. W., & Co., Philadelphia, Pa.  
Bird, F. W., & Co., East Walpole, Mass.  
Carey, Philip, Mfg. Co., Lockland, O.  
Chattanooga Roof & Fdry. Co., Chattanooga, Tenn.  
Eastern Granite Roofing Co., New York, N. Y.  
Garrett, C. S., & Son, Co., Philadelphia, Pa.  
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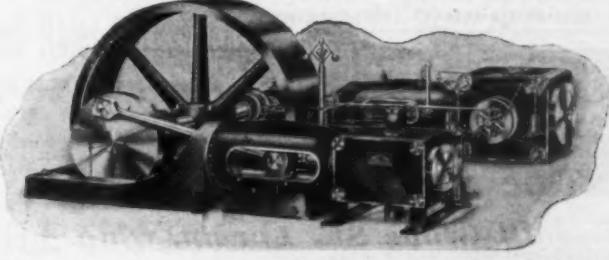
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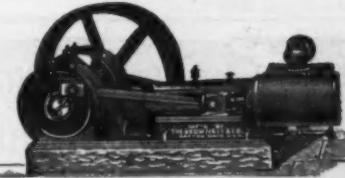
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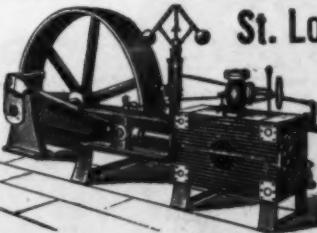
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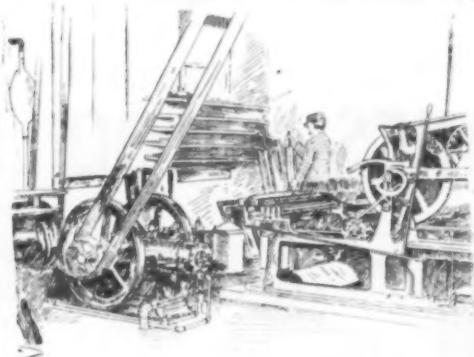
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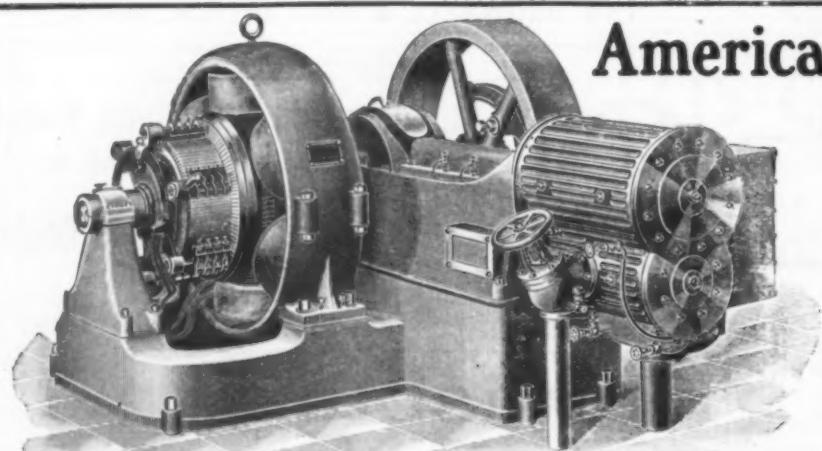


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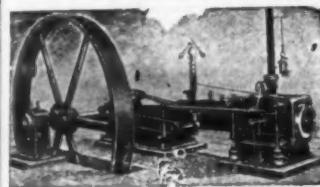


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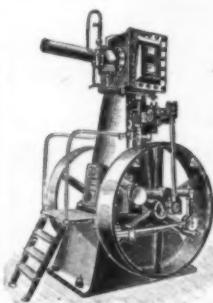
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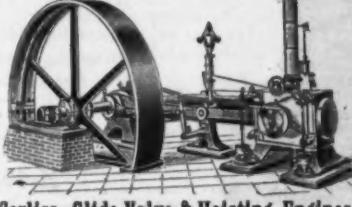


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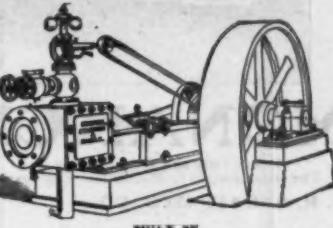
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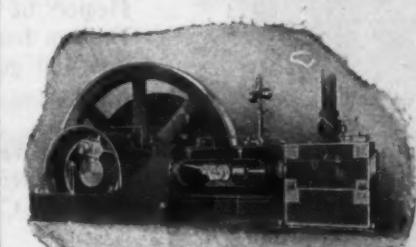
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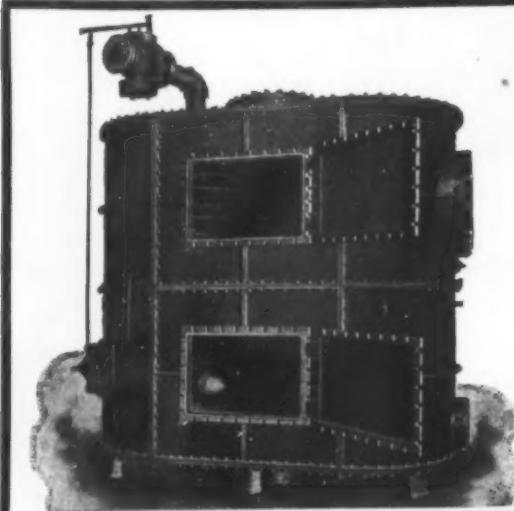
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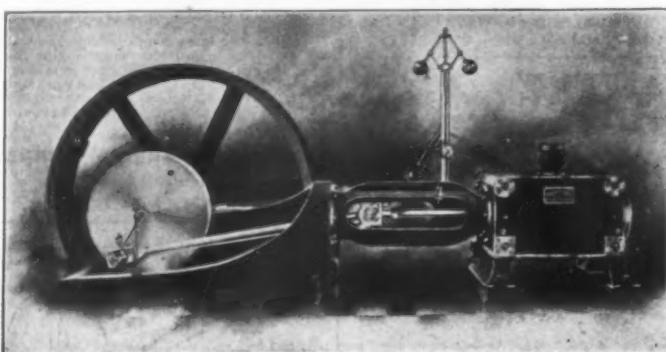
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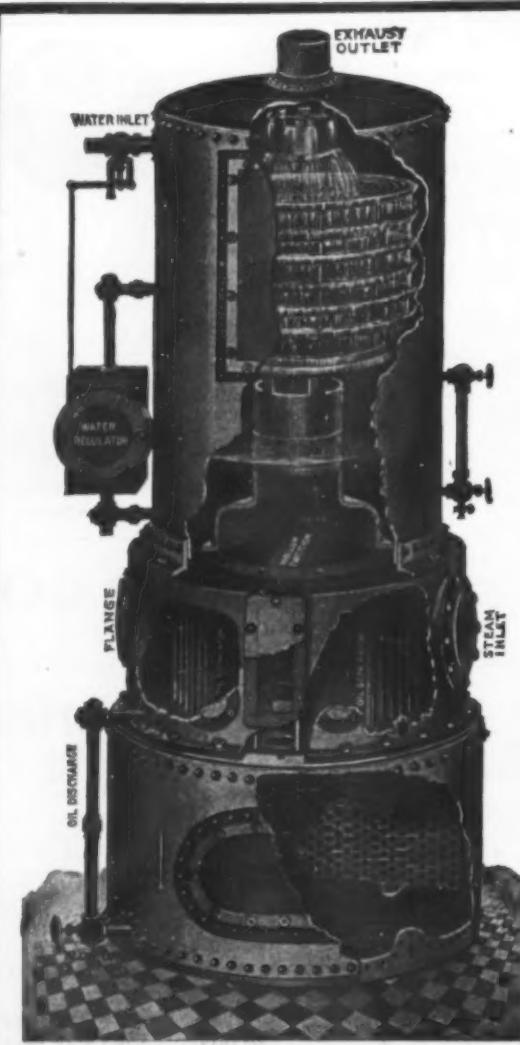


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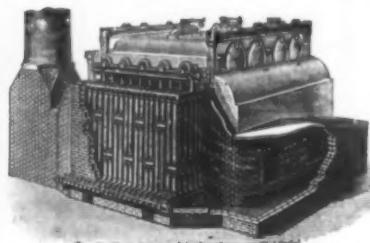
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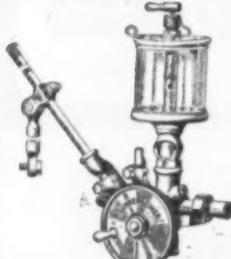
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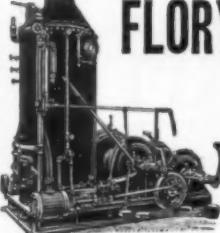
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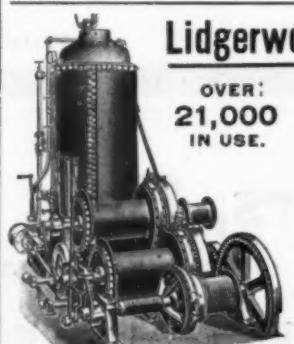
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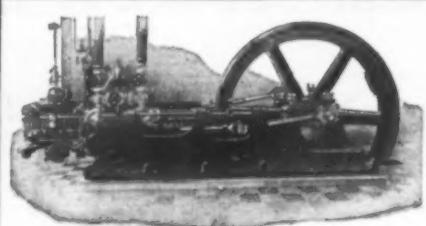
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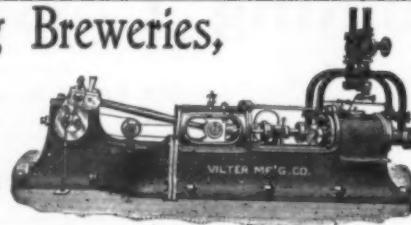
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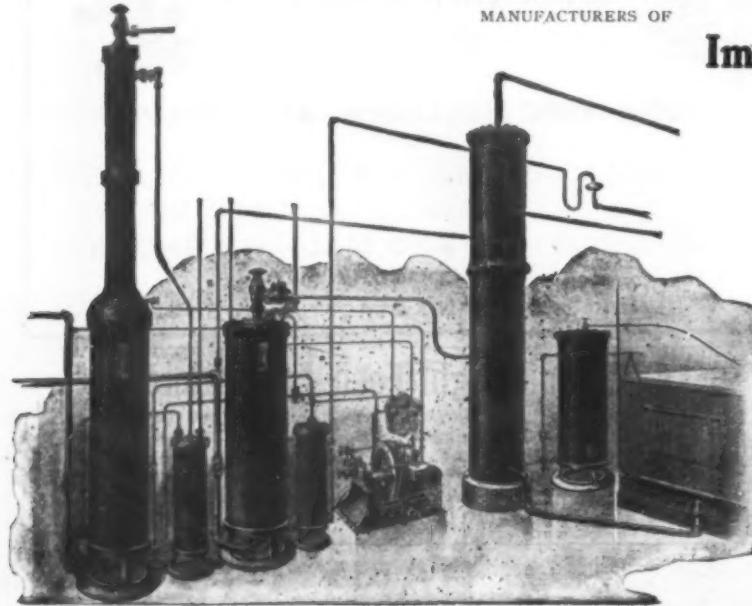
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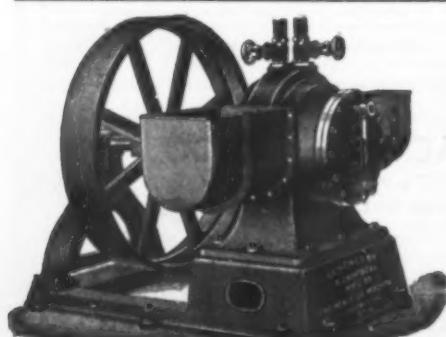
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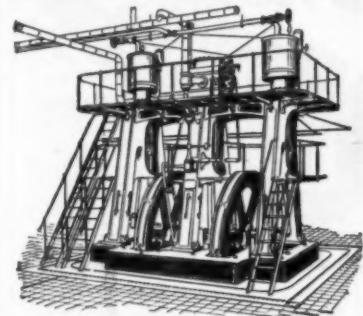
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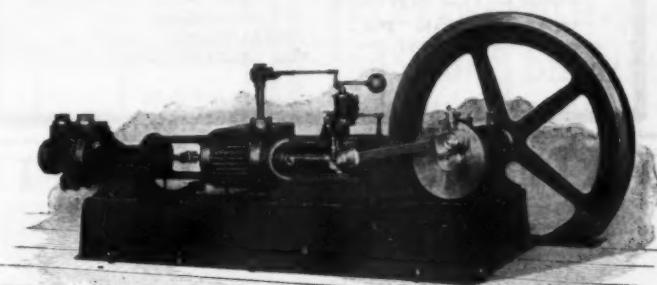
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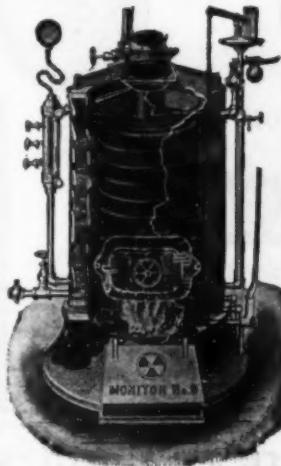


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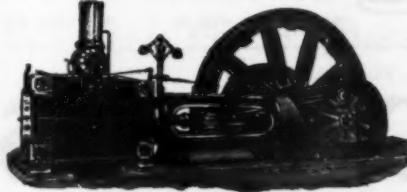
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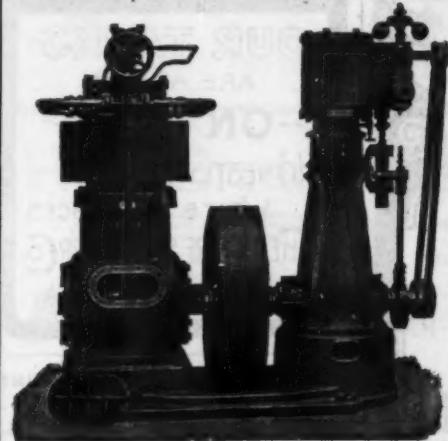
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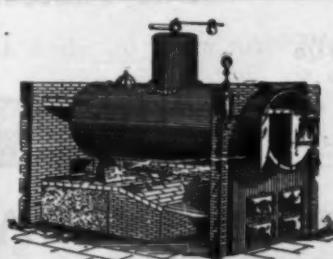
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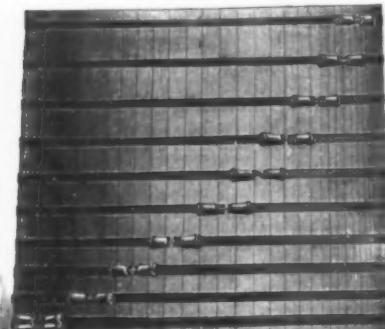
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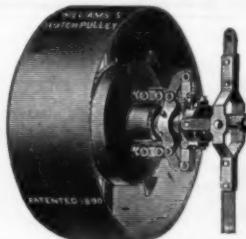
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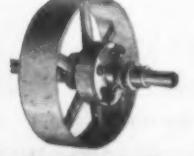
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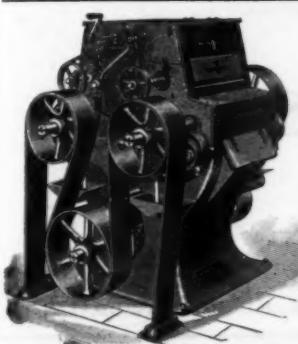
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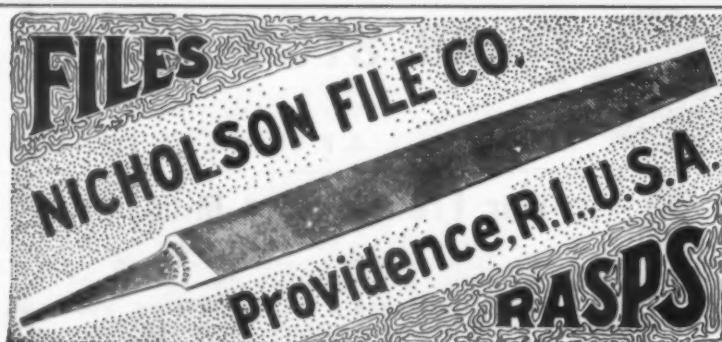
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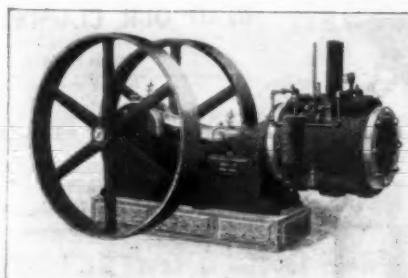
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A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XLIV. NO. 13.  
WEEKLY.

BALTIMORE, OCTOBER 15, 1903.

\$4.00 A YEAR.  
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## Manufacturers' Record.

PUBLISHED EVERY THURSDAY BY THE  
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RICHARD H. EDMONDS, President.  
THOMAS P. GRASTY, Vice-President.  
FRANK GOULD, Secretary-Treasurer.  
OFFICE: MANUFACTURERS' RECORD BUILDING  
BALTIMORE.

RICHARD H. EDMONDS,  
Editor and General Manager.

THOMAS P. GRASTY,  
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BALTIMORE, OCTOBER 15, 1903.

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For the first issue in the month  
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Morning of the week preceding.

THE DAILY BULLETIN of the Manufacturers' Record is published every business day in the year for the purpose of aiding manufacturers and business men generally who need to keep in daily touch with the new industrial, railroad and financial developments of the South and Southwest. Supplementing and in connection with the work of the Manufacturers' Record, it is an invaluable aid to all who are seeking business in the South and Southwest, the most wonderfully endowed section of America, where industrial, railroad and financial activity is creating an ever-widening market for machinery of all kinds, railroad equipment and building supplies, and for financial operations, etc., and where the knowledge and skill of the engineer and expert will find their largest field of operation.

The Daily Bulletin is intended simply to cover every day the work of the "Construction Department" of the Manufacturers' Record in reporting every new mining, manufacturing, railroad and financial enterprise organized in the South and Southwest, and it is not intended to be a general daily newspaper. To all who want to be advised every day of every new enterprise organized in that section it is invaluable.

In a reference to Baltimore newspapers the Building Trades Employers' Association Bulletin of New York city says:

Baltimore's class journals include the Manufacturers' Record, which is virtually the industrial voice of the whole new South.

### TEXAS-LOUISIANA OIL.

With the collapse of the great speculation in the Southwestern oil fields the general public has not given as much attention to the oil situation in Texas and Louisiana as was attracted to that region two or three years ago. The fact, however, is that a vast oil industry has been established there on a permanent basis, and money is being made all over the field. The substantial features of the industry are de-

tailed on another page of this week's issue of the Manufacturers' Record in correspondence from Beaumont, with special reference to Texas. In that are described the permanent improvements in the way of tanks, pipe lines and refineries and the general conditions of trade in the output. Of the three largest companies in the field, the J. M. Guffey Petroleum Co. owns fourteen iron tanks at Spindle Top with a capacity of 600,000 barrels, twenty-one tanks at Port Arthur of 1,160,000 barrels capacity, two 25,000-barrel tanks at Sour Lake and is building nine others there of 55,000 barrels capacity each, twenty miles of six-inch pipe line from Spindle Top to the Gulf refinery at Port Arthur and other stretches of pipe line, fifteen steamers plying between Port Arthur and London and New York, tank cars, etc. Twenty-eight other companies have steel tankage in Texas alone of more than 10,000,000 barrels capacity, and there are being produced in the Texas-Louisiana fields today at least 80,000 barrels of oil every twenty-four hours, with a likelihood that this production will be maintained, if not increased, for an indefinite number of years. In 1900 the output of petroleum in the whole country was 63,362,704 barrels. That included 830,039 barrels from the Corsicana (Texas) field and nothing from those fields whose development dates from the striking of the Lucas gusher in January, 1901. Now the annual output of the new fields in Texas and Louisiana is about 25,000,000 barrels, nearly five-twelfths of the total output of the whole country three years ago.

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 56 and 57.

### MERELY A VAUNT.

Mr. Thomas I. Kidd, vice-president of the American Federation of Labor, is quoted at Chicago as announcing that if organized capital, through its anti-boycott and employers' associations, does not stop its raids on the savings of the trades-unions, the union men will withdraw \$300,000,000 from the savings banks, and intimating that it is within the power of union labor to bring about a financial panic. This evident threat against resort to law for protection against the cowardly boycott and other devices of misguided members of organized labor to bolster up a rule by the minority should hardly be taken seriously, except by the great masses of wage-earners of the country, and by them only as an indication of the foolhardiness which they are invited to sustain. Granted that the 1,200,000 members of labor organizations are so fortunate as to be drawing interest from \$300,000,000 in savings banks, it is scarcely within the range of possibility that even a large minority of those 1,200,000 depositors could be persuaded to withdraw their savings from the banks with the in-

tent of creating a financial panic. Granted that such withdrawal would create a panic, the suffering and loss entailed by such a panic would fall immediately and most disastrously upon the wage-earners of the country. They would not only lose the interest which their undisturbed deposits would bring them, but they would be deprived for a time of the opportunity to earn wages. From whatever point of view the threat of Mr. Thomas I. Kidd is considered its absurdity is manifest and its utterance is likely to do more damage to the cause of organized labor than to any other thing.

### SECRETARY WILSON TO STUDY COTTON.

It is announced that Secretary Wilson will visit the South to make a personal investigation of the cotton crop of this year. A dispatch from Washington to the Baltimore Sun says:

There have been so many conflicting reports on the subject from official and unofficial sources that the conservative, practical Secretary has concluded he may be able to learn more by personal observation in the cotton fields than he can from the reports sent him by his agents and others who have a commercial interest in the cotton market.

If the Secretary of Agriculture's interview of August 20 last regarding cotton conditions—an interview which, coming from that quarter at such a vital time, could hardly be classed as conservative—was based upon reports from "others who have a commercial interest in the cotton market," the reports must have come from those individuals whose interest is to lead the cotton-growers to sell at the lowest price. Facts of the past month have rather weakened the position of these bears, and they may be of sufficient weight to induce Secretary Wilson to make the acquaintance during his visit to the South of those "gamblers" whom he credited with responsibility for the high prices and to discover whether he has not been committed to a grave mistake.

In that famous interview he declared that "the shortage of raw cotton to the manufacturer is not due to shortage in the crop, but to the fact that the corner in cotton has put the price of the raw material to a point where the manufacturer cannot profitably use it." As bearing upon that point and upon the question of gambling Secretary Wilson might ponder with profit upon the statement by a correspondent of the New York Times that this is the season of the year when "the spinner and the bear operators combine to depress prices in order that they may secure the staple from the hand of the farmer at a price lower than general conditions warrant," and upon the situation in New York on September 29 thus described:

These men had contracted to deliver cotton to Brown, and as Brown owned all the cotton, they had to buy cotton at his price or fail to keep their contracts, which is tantamount to bankruptcy.

Perhaps such pondering might lead him to revise his opinion about the

"gamblers," and might suggest that a responsible official of the government should not be misled into statements which might aid a combination of spinners and bear operators "to depress prices in order that they may secure the staple from the hands of the farmer at a price lower than general conditions warrant."

As to the effect of the "high prices" for cotton, he might find opportunity during his trip to the South to gain the point of view of the producer, such as that set forth by James R. Maxwell of Abilene, Texas, in a letter to the New York Journal of Commerce. Inspired by the remarkable expression by President Walmsley of the New England Cotton Manufacturers' Association of hope for success of "efforts now being made to grow cotton in other countries in sufficient quantity and of the required staple," Mr. Maxwell wrote regarding low prices of cotton:

The continuation of the selling of cotton at less than ten cents means a continuation of holding the raiser of cotton down to poverty, ignorance and debasement from what such labor in supplying the needs of such a staple to the world should be entitled to. "The hardships and suffering of thousands of families" caused by the high prices of cotton, according to Mr. Walmsley, as a matter of fact do not amount to a row of pins in comparison to the "hardships and suffering" of thousands and tens of thousands of families entailed by the hammering down of the prices of cotton below the average cost of production, as has been done for years back. The commercial world cares absolutely nothing for the well-being of the producers. The chances now seem to be that this coming crop will likely net the producers a small profit. These producers naturally are not caring much about the howls of the manufacturing interests, nor do they suppose that there has been any philanthropy influencing those responsible for tolerably fair prices for cotton. \* \* \* They are not rejoicing at anyone's misfortunes or sufferings; they are merely feeling good at being able to see that perhaps they have been able to meet their obligations this year, for the first time, perhaps, in a long series of years.

Mr. Maxwell's impressions about all the phases of the problem may not generally prevail, but as a cotton-planter of thirty-five years' experience his opinion about the effect of 10-cent cotton, as far as the producers are concerned, ought to have some weight.

In this connection it may be interesting to recall the fact that in the last hundred years there have been but two periods—one between 1840 and 1849 and the other since 1890—in which the average price of cotton was not above ten cents a pound, and yet there was a market for the cotton goods produced during that time, and that while growing cotton for eight cents a pound is fairly profitable to more thrifty Southern farmers on exceptional land, 10-cent cotton means comfort for the great mass of them. It is hoped that the visit of Secretary Wilson to the South may lead him to a conviction that the "high prices" of cotton are not due entirely to "gamblers;" that they are but a return to the normal for the cotton-growers, and that even the mills may survive under them, whatever may happen to the bears who sell cotton that they never possess.

## INTERURBAN RAILWAYS IN THE SOUTH.

Scarcely a day passes without the announcement of a plan to build an interurban electric-railway in some part of the country. Recently a number of these announcements have come from Southern States, one of the most recent being a project for an electric railway across the State of Virginia from the Potomac river to the North Carolina boundary; still another is the plan for a line between the cities of Houston and Galveston, Texas; a third is for a line between Atlanta and Marietta, Ga. In Kentucky there are several plans on foot in and about Louisville. Other plans are noted around Nashville, Tenn. In West Virginia there are several interurban-railway projects in the vicinity of Wheeling, Parkersburg and other places. In fact, there is not a State in the South that is without an interurban railway either in operation, in process of construction or in prospect. Maryland, North Carolina, South Carolina, Florida, Alabama, Mississippi, Louisiana, Arkansas and Missouri all have interurban projects under way in some form or other, as well as the other States herein named, while in the Indian Territory and Oklahoma there are also plans of magnitude for electric roads, one of the most notable being to connect Guthrie and Oklahoma City.

Undoubtedly, interurban electric railways must play a considerable part in the further development of the South. The success of the Augusta and Aiken line and also of that between Richmond and Petersburg, as well as others, such as the Dallas and Fort Worth road in Texas, proves the availability of electric traction under certain conditions and in certain localities. Concerning the last-mentioned line a dispatch from Fort Worth says that soon the management will have to solve the problem of how to care for the travel. It was opened about a year ago with only six stations, including the terminals, but the demand for accommodations has been so great that there are now thirty-one stopping-places on the line, which is only about thirty-two miles long, and demands are being made for other stations. The growth of business, it is stated, while as great as was expected, has come sooner than the most sanguine officials anticipated.

Electric interurban roads have been quite extensively developed in several of the Western and Northern States, Ohio and Indiana particularly being well supplied with this method of transportation. Such lines are needed in all the States of the South, and the sooner they are constructed the earlier will be realized the benefits to accrue from development of the great natural resources of that section. The notable success of the Dallas and Fort Worth road shows what may be expected to result from similarly connecting other progressive cities. Had anyone been told a few years ago that such rapid growth of business would follow the establishment of an electric line between those two towns of Northern Texas he would probably have been incredulous, even if he did not scoff at the idea; yet the stubborn facts of today prove that his judgment would have been amiss, and now they should be borne in mind by those who have to overcome prejudice and ultra-conservatism in order to carry out future electric-railway plans.

Such projectors and promoters of new electric railways will find much of practical interest in an article recently published in the Manufacturers' Record entitled "Social Effects of Interurban Electric Roads."

The author, Mr. J. B. Scott, C.E., presents there many interesting and valuable facts concerning what has been done by the building of such lines, and he also gives considerable information about the manner of proceeding with the financial organization of such enterprises. His suggestions will doubtless prove to be of practical value to persons who, realizing the necessity for electric interurban railways and desiring to build them, may lack the necessary financial experience to insure the fulfillment of their plans.

Electric railways undoubtedly have their limitations, but they also have decided advantages which enable them to perform service under conditions which would be prohibitory for steam lines. They are, therefore, found valuable not only for giving transportation to parts of the country from which the steam road is excluded by the topography, but as feeders to steam lines. Necessarily interurban railways take from steam roads a certain character of travel. For instance, in close proximity to centers of population they carry most of the passengers, but it must not be forgotten that they also develop sections of country to a degree that insures to the steam roads such increased patronage, both in passengers and freight, that in time it more than compensates for the loss in local passenger travel. Each type of railway has its particular field of service, and when either has been built with due regard to traffic requirements there will not be rivalry between steam and electric roads, but a friendly interchange of business, just as the street railways of a city convey passengers to and from the terminal stations of trunk lines.

## GREENSBORO NOT SLIGHTED.

Mr. P. D. Gold, Jr., president of the Young Men's Business Association of Greensboro, N. C., writes to the Manufacturers' Record under date of October 9 as follows:

I have this morning received a letter from a very prominent man in Greensboro, N. C., who desires that I ask you, in the language of the North Carolina mountaineer, "how come" Greensboro was slighted in your article suggesting points in North Carolina worth seeing by members of the American Economic Association on their way to New Orleans. I enclose you herewith the editorial which brings up the question. Now we would like to ask why Greensboro is not worthy of mention.

We wish that the "very prominent man in Greensboro, N. C.," had written to us for the information he desires. If Mr. Gold had been acquainted with the facts it would have been unnecessary, we believe, for him to write as he has done. He has been stirred up by an editorial of about a week ago in the Charlotte Observer, but the tone of his letter shows that he is evidently not aware of the genesis of that editorial. We take pleasure, therefore, in giving him the facts.

Several months ago the Manufacturers' Record received a letter from Mr. Theodore Marburg of Baltimore asking, in behalf of the president of the American Economic Association, which is to meet at New Orleans in December next, that we suggest stopping-points of possible interest to a party of members of the association on their trip to and from New Orleans. The narrow limitations for such suggestion appeared in the following statement of Mr. Marburg:

We are planning to have a private car and to go and come by different routes, stopping at two or three points on the way down and an equal number on the way back.

Deferring the suggestion until a convenient season, the Manufacturers' Record published on July 23 an editorial embodying Mr. Marburg's letter, dwelling upon the difficulties of making adequate suggestions under the limitations of the request, and stating that confining the stops to five or six points would permit the visitors hardly to skim the economic South, so that they would be obliged to base their impression largely upon a flying view. We then sketched a railroad itinerary, mentioning casually as included in that itinerary about twenty-five localities in the whole South, and omitting to mention about two hundred and fifty other localities, including Greensboro, N. C. We could have mentioned sixteen or twenty places in North Carolina instead of six, all of them worthy with Greensboro of at least a day's visit from persons studying the South, but that was not the purpose of Mr. Marburg's request. He distinctively emphasized the short time allotted for the trip, and recognized that his party was not to expect from the Manufacturers' Record a guide-book for a six months' trip, but merely a broad sketch of the many and vast energies of the South.

This we tried to present as briefly as possible, in the belief that every progressive Southern community would welcome the mention of any of its neighbors as indicative of the advancement and advantages of all, and in the hope that many of them might make the sketch the occasion to invite, of their own initiative, the attention of the visitors to themselves. That was the spirit in which the Manufacturers' Record, not undertaking to invite the visitors to be the guests of any community, outlined the itinerary, and, referring to its conclusion, said:

The travelers will then have hardly familiarized themselves with the table of contents of the volume of the economic South. But it is certain that their appetite for the details will be whetted, and they will regret that they had not stopped at sixty places instead of six.

We hope that President Gold will read our editorial of July 23 and will then recognize that the assumptions in his letter to us are not justified either by anything in that editorial or by the attitude of interest in the welfare of all the South and of all communities there which the Manufacturers' Record has maintained for more than twenty years.

## TO UPBUILD THE SOUTH.

A correspondent of the Evening News of Baltimore, discussing the estimate that 20,000,000 immigrants have landed in the United States since 1820, deduces figures tracing to this immigration the prosperity of this country. He shows that of the 67,000,000 whites in the country, 36,000,000, or more than 50 per cent., are foreign born, or children of foreign-born parents. He says:

That is the secret of American prosperity; we had the natural resources, and men came to develop them; energetic foreigners and enterprising men from the Eastern States went West as pioneers, pushing the frontier westward to the Pacific, developing the resources of the region, carrying civilization with them and growing up with the new country. Cities grew and are flourishing; the wilderness has been made to blossom as the rose. It took many workers and many years to supply the domestic needs of the rapidly-growing nation; as these were supplied we had a gradually-increasing surplus, which we exported, until last year our exports were close to \$1,500,000,000, and still increasing. Thus prosperity goes marching on.

For various reasons, hardly necessary to rehearse here, comparatively few of the immigrants found their way to the

South. The fact to be borne in mind now is that most of the reasons why the South did not have a larger share no longer are active, while at the same time it is the portion of the country whose natural resources have been least developed. These await the energetic foreigners and the enterprising men from other parts of the country of the class who made their fortunes in building up the great West. That these men and their children are willing to repeat in the South the experience in the West of forty and fifty years ago cannot be doubted. The very activity of Southern railroads in attracting immigration to the South is proof of it. But the willingness to find homes in the South and the readiness of railroads to satisfy the wish must be backed up by persistent, painstaking advertisement of Southern advantages by home folks and by hearty whole-souled welcome to the newcomers.

## SOUTHERN WORKERS WARNED.

About two weeks ago a report was published from Fall River, Mass., that the United Textile Workers of America had virtually abandoned the attempt to unionize Southern cotton mills through extraneous influences. At the instant the Manufacturers' Record stated that the very publication of such a report meant that the campaign against the Southern textile interests had not been abandoned. Now comes a dispatch from Philadelphia announcing that the convention of the United Textile Workers of America, which will meet in that city on October 20, will devote much of its time to the discussion of unionizing cotton-mill labor in the South, and adding:

The unionizing of the Southern cotton-mill workers is the most vexing question expected to come before the convention. It may be said here that some of the leaders among the unionized workers of the North feel that they have the warm secret support of Northern manufacturers in their efforts to organize the Southern workers, as the accomplishment of this design would lessen the fast-growing advantage the Southern mills have in their competition against the Northerners. The problem, however, is most difficult. Textile labor leaders here explain that the Southern workers have little union enthusiasm. They show a willingness to organize when approached by an aggressive organizer, and stick to the union so long as the organizer remains among them, but soon drift away when he leaves. Labor leaders say, however, that the coming convention will tackle the Southern problem with a determination to solve it and to unionize the whole field. The ultimate object is to bring the Southern cotton-mill worker up to the hours and wages of the Northern worker.

And the ultimate result of this extraneous effort, if it could by any possibility succeed, would be the duplication for Southern workers of the distress and other evils manifested elsewhere at irregular intervals, and most recently in Lowell, Mass., and Philadelphia, Pa. How could there be any other result of successful agitation under the auspices of the United Textile Workers of America? For it is one of the most revolutionary bodies affiliated with the American Federation of Labor. Here are a few specimens of its "principles" selected from the report of the United States Industrial Commission:

Society at present is composed of classes whose interests are highly antagonistic to each other.

The few hundred thousand proprietors arrogate to themselves the larger part of the wealth produced by the workers.

The laboring millions receive from the product of their labor only so much as is necessary to live a life of misery and starvation.

The proprietary class presses into its service the power of the State, the police, militia, press and pulpit to protect the posses-

sions produced by others and to declare for the "sacredness" of property.

While the millions of the working people are left without the means of existence, without rights and unprotected, betrayed and sold out to their enemies by the State, by the press and by the pulpit, the arms of the police and of the militia are directed against them.

That is a sweet-scented platform from which to approach the full-blooded American workers in Southern cotton mills. Its anarchy may appeal to the Greeks, the Poles, the Huns and the riff-raff of aliens among the workers in other parts of the country, but it is not believed that the plans of the United Textile Workers against the South, whether or not they may be secretly encouraged in a few instances by representatives in the North of their mortal enemies, "the capitalistic class," will prevail to any extent in the South. Alabama by recent enactment has pointed the way for a suppression of the methods through which alone such an agitation can succeed. The announcement from Philadelphia ought to be sufficient warning.

#### BALTIMORE'S FINANCIAL GROWTH

A study of Baltimore banking institutions as they were in 1893 and as they are now brings out some impressive and important facts upon the great increase in the financial strength of the city within the past ten years. In 1893 the total of capital, surplus and undivided profits and deposits in the various national banks, State banks and trust companies in Baltimore amounted to \$56,690,564, and it now amounts to \$127,919,541, an increase of \$71,228,977, or more than 125.6 per cent. The total capital of these institutions is now \$30,223,460, an increase as compared with ten years ago of \$12,905,148, or more than 74.5 per cent., but the surplus and undivided profits, which now amount to \$28,976,241, display the great gain of \$21,412,455, or more than 283.1 per cent., and the deposits now present a total of \$68,719,840, an increase of \$36,911,374, or more than 116 per cent. The capital, surplus and undivided profits combined now amount to \$59,199,701, an increase of \$34,317,603, or more than 137.9 per cent.

During the same period there was also a remarkable increase in the deposits of the savings banks of Baltimore. In 1893 their total was \$41,877,622, and now they are \$66,928,028, an increase of \$25,050,406, or more than 59.8 per cent. Adding the savings-banks deposits to the total of the other financial institutions makes a grand total of \$194,847,569, which shows a gain of \$96,279,383, or over 97.6 per cent., in the last decade. Inasmuch as these calculations are based upon the last statements of the various institutions considered, and as some of these statements were made early in the year, it is safe to report the total financial strength of all Baltimore banks and trust companies as being now \$200,000,000.

In renewing subscription to the Manufacturers' Record Fant Bros. of Anderson, S. C., write:

The possibilities of enlarging a business by reaching the best and most intelligent manufacturers and dealers are beyond a business man's most sanguine imagination if he reads persistently and closely the pages of your paper and follows them up with prompt correspondence and inquiries about buying or selling any kind of machinery or material, whether new or second-hand. Four dollars is nothing for the subscription when it makes a subscriber liable to make hundreds and thousands in proportion to the nature and volume of his business by simply posting him.

#### A REWARD OF PUBLIC SPIRIT.

A notable and gratifying result of the temporary troubles which have come upon J. Wm. Middendorf & Co. of Baltimore and John L. Williams & Sons of Richmond, Va., is the substantial sympathy which has been extended to the firms from many quarters, together with other evidences of the esteem in which they are held in business circles. An unusual tribute came to John L. Williams & Sons from the Chamber of Commerce and from the common council of Richmond. The first-named body adopted unanimously the following resolutions:

"The Richmond Chamber of Commerce has heard with regret of the temporary embarrassment of the firm of John L. Williams & Sons, composed of gentlemen who, by their correct dealings and liberal public spirit, have won the confidence and esteem of the entire community, and the Chamber rejoices to believe that the condition of their affairs justifies the hope that the firm will in the near future discharge all of its obligations and have remaining for itself a very considerable surplus."

In the same spirit the common council adopted the following:

"WHEREAS, the common council of the city of Richmond has learned through the public press of the temporary financial embarrassment of the public-spirited citizens of this city, composing the firm of John L. Williams & Sons; therefore be it

"Resolved, That we express our profound sympathy with the gentlemen of said firm in their present embarrassment, and an earnest wish for their speedy relief, recognizing them as being among our most enterprising, generous and progressive citizens, well worthy of our highest esteem."

In reply to the latter, Mr. John L. Williams wrote to its mover, Mr. Morgan R. Mills, as follows:

"In behalf of myself and family, I beg leave to offer to you, and through you to the city council, our sincere thanks for the resolution offered by you and approved by the body referring to us. We have tried to do our duty as good citizens, and feel very well assured that no one will be the worse for our efforts. Whether we come out of this storm with little or much or nothing, the works that have been accomplished for our city and the South will stand as lasting benefits. It is our unspeakable and profound gratification to be associated with the advancing welfare of our people."

The incident is unique, and it is worthy of record as indicative of the readiness of right public opinion to give recognition to public spirit.

#### BLOCKING THEIR OWN GAME.

There is food for reflection on the part of men who make their living about the New Orleans docks in views of the effects of labor difficulties expressed by Mr. Alfred A. M. Heyn, managing director of the Head Line of steamers. He is quoted by the Times-Democrat as follows:

"We are in New Orleans because it is a big shipping port, and because in the past we have made money in the business from here. No ties of sentiment bind us to the port, however, and in this we are only like all the other lines that center at New Orleans. It is business entirely with us, and that is the only light in which we consider the question. When, through labor troubles, we are unable to ship from this port with profit, we will seek some other port. We formerly operated a line into Baltimore, but labor troubles drove us from that city. The labor troubles in New Orleans may succeed in repeating the experience in this city. We have been running between fifty and sixty steamers

every year to this port, but have been giving more and more of the trade to Galveston, and in the event of a prospect of continued trouble here, we will give still more to that port."

Fortunately, the latest trouble at New Orleans has been adjusted. But the laborers have been shown by Mr. Heyn that they may overreach themselves and by making extravagant demands may destroy the opportunity for their employment.

#### THE SOUTH'S INDUSTRIAL GROWTH.

Speaking of the facts set forth in his report and of industrial conditions generally throughout the Southern States, President Samuel Spencer of the Southern Railway Co., said in a recent talk in the Atlanta Constitution:

"The industrial growth of the South has been remarkable. While the development for the year ended June 30, 1902, was quite unprecedented, the last year exceeded it by 17 per cent. in the capital invested in traffic-producing industries on the Southern Railway system proper. In the year previous such investments were very generally of the character of new enterprises involving the purchase of premises and the erection of factory buildings, while during last year investments were more strictly in mine, factory and mill equipment designed to increase capacity of output. Investments of this character along the Southern Railway lines were very much greater last year than the year previous, and, of course, that implies a correspondingly heavier tax upon the physical capacity of the railroad to move the traffic. During this last year the increased investment in coal mines, iron mines, lumber mills, woodworking plants and other closely-related interests, which are the producers of largest tonnage, was even more marked than in other classes of industrial enterprises.

"This gives an indication of the traffic requirements imposed upon the railroads in addition to the usual crop movements, and emphasizes the importance of the fullest co-operation of all interests in every way possible to relieve a possible transportation congestion. This congestion is not limited to the South. It is more or less general throughout the country; but in the South, where the industrial awakening has been relatively the greatest in a short space of time, the situation has been more difficult to forecast and to reasonably provide for than in other sections where industrial changes have been more gradual."

#### ANOTHER WATER-POWER DEVELOPMENT

New water-power-electrical enterprises continue to be announced in the South, where a number of valuable properties have already been utilized and others are in course of development. Capitalists have been formulating plans for this latest project for some months past, and the details are now announced. Charter has been obtained as the Winding Shoals Electric Power Co., capitalized at \$500,000, of which amount \$400,000 is to be issued in bonds which have been subscribed by Eastern capitalists. The riparian rights have been secured. They are located on the Chattahoochee river near Buford, Ga., where more than 6000 horse-power can be obtained. This estimate is based on the lowest stage of the river ever recorded. The dam will be of the crib type, requiring more than 1,000,000 feet dry rubble and sawed lumber. More than 6,000,000 feet of sawed lumber will be used in all the work. At Atlanta the company will have a substation for reducing the electric current to a lower voltage for transmission into the city. J. W. Peterson has been in charge of the

engineering work and surveys so far, and will be chief engineer in charge of all the construction. All necessary contracts will be awarded in the near future. Geo. W. Winslow of Chicago is president of the company; W. W. Gorham, also of Chicago, vice-president, and D. W. Stancliff of Atlanta, secretary-treasurer. Various industrial enterprises are to be supplied with power, the company having already contracted to furnish electricity for operating the Atlanta, Buford & Gainesville Railroad, an interurban line about to be constructed. The Electrical Equipment Co., 930 Monadnock Building, Chicago, of which J. W. Peterson is president, has charge of the plans and specifications, and will soon be ready to receive bids on construction work and furnishing the machinery.

#### FINE TOBACCO FOR TEXAS.

Mr. L. H. Shafter, the government expert who has been investigating the practicability of raising fine tobacco in Eastern Texas, is quoted as announcing that there are three sections of the State that can grow a cigar leaf of commercial value. In the red or chocolate belt, in his opinion, can be produced the highest grade of Cuban filler that can be raised in the United States, and by the use of cheesecloth shade as fine a wrapper as is grown in Cuba under shade. The sand alone will also produce a grade of filler tobacco, and the gray sand alone is more adapted to the culture of the Sumatra wrapper. Climatic conditions are favorable, and these soils lie within 50 to 150 miles of the Gulf. The suggestion of Mr. Shafter that, the government having made this demonstration, the people should put it to practical use, is an excellent one, and should be promptly adopted.

Mr. Shafter goes further and urges the people around Nacogdoches to enter upon the manufacture of tobacco. He quotes from the Gadsden County Times, published at Quincy, Fla., the statement that in Quincy 2000 persons, mostly negroes, are employed in the tobacco-packing warehouses at wages aggregating \$15,000 a week, and he added:

"Now, I wish to emphasize the point that the production and manufacture of tobacco gives employment to a class of labor that cannot be utilized profitably in hardly any other channel. There is no opportunity for vagrants in a town that has a small tobacco factory. A town, to be prosperous and self-sustaining in spite of drouth and other calamities, must build factories to consume the raw material and convert it into articles of usefulness and staple commodities, thus giving constant and remunerative employment to labor that must live and spend its earnings at home. 'Diversification and home industry' is the magic sesame that must unlock all the hidden treasures of East Texas as well as elsewhere."

Mr. Shafter further said that the boll-weevil might be a blessing in disguise in forcing the people to turn their attention to raising tobacco and other crops instead of making cotton the sole money crop.

#### FOR CLEAN STREETS.

The Evening Chronicle of Charlotte, N. C., has started a campaign for cleaning sidewalks. Charlotte is one of the Southern cities eminently typical of the progressive South. It has developed its industries to a wonderful degree; it has been foremost in promoting good roads and good schools, and yet, according to the Chronicle, it is decidedly backward in the matter of cleanliness of streets, sidewalks and back yards. In that respect Charlotte is by no means exceptional. But that fact should not cause it to hesitate about leading to hasten the

work of reformation. More than ever before there is a necessity for Southern communities to present as attractive an appearance as possible. In recovering from the wreck of a generation ago such details may have of necessity been overlooked. Now, with homes seekers and investors turning their steps southward, nothing of the kind should be neglected.

#### MUSSEL SHELLS FOR BUTTONS.

The arrival at Memphis of a barge load of mussel shells from the White river in Arkansas leads the Scimitar to speak of the demand for shells by button manufacturers of the North which has set hundreds of persons in Arkansas and two or three thousand on the lower Ohio to dredging for the shells. In many parts of the South these shells abound, and in two or three places a desire has been manifested to encourage the manufacture of buttons near the sources of the supply of the raw material, one plan including the utilization of the waste from the shells in other industries. It seems to be a waste of money, time and energy to employ steamers, small boats and barges in transporting the shells to distant points, when they should be manufactured into buttons nearer home.

#### Water-Power Available.

Mr. Wm. G. Haynes of 23 East Fourth street, Atlanta, Ga., in a letter to the Manufacturers' Record writes as follows:

"In your last issue you stated that some Northern cotton mills were considering the erection of branches in the South. I have a valuable water-power on the Southern Railroad between Griffin, Ga., and Columbus, Ga., from which I can supply a cotton mill with 1500 to 2000 electrical horse-power at \$15 per horse-power per annum, which is about half the power the falls will generate, the other half being already contracted for by a 20,000-spindle cotton mill. The parties interested in the electrical development hesitate somewhat on account of not having customers for all the power. Knowing the price named above for power would be an inducement to a large factory, I thought possibly if I could communicate with some of the mills you referred to I might be able to close a deal with them and so hasten the completion of two more large enterprises for my State."

#### Tin from Texas.

Dr. Wm. B. Phillips of Texas, who has charge of the preparation of the mineral exhibit of Texas for the St. Louis Exposition, says that the tin ores of the State will excite a great deal of interest. The ores are taken from the east slope of the Franklin mountain, about twelve miles north of El Paso, and occur in well-defined fissure veins, the largest of which has a width of from two to five feet, and can be traced on the surface for a distance of 1200 feet.

#### Alloys and Hack Saws.

Charles A. Scott, Granite Building, Rochester, N. Y., writes the Manufacturers' Record that he is desirous of obtaining the name and address of the manufacturer of the hack-saw blade called the "Horseshoe Brand." He also wants to buy at wholesale rates the alloy termed "Magnalium."

#### Openings in Scandinavia.

C. F. M. Knudsen, 4 Holloendervej, Copenhagen, Denmark, writes to the Manufacturers' Record that, having large business connections in Scandinavia and importing office furniture and typewriters, he is anxious to have illustrated catalogues and closest wholesale prices of American exports.

## SUBSTANTIAL FEATURES OF TEXAS OIL PRODUCTION.

[Special Correspondence Manufacturers' Record.]

Beaumont, Texas, October 10.

The most striking feature of the Texas oil situation today is the absence of the boomer and the elimination of stock-jobbing operations. With the loss literally of millions of dollars through injudicious investments in enormously-capitalized and often badly-managed corporations, it is small wonder that outsiders are chary of oil speculation, and although there are those who maintain that never have the possibilities been so great for safely and profitably engaging in the oil business here, it is yet true that the field today is almost entirely left to the operator, and appeals to the general public to take a flyer in oil are meeting with no cordial response. That this is due in part to a lack of general information as to the vast extent of the Texas-Louisiana field and the practical permanence of the oil supply there is probably no room for doubt, and it is this feature of the case which furnishes holders of lands in promising and developing fields with the belief that some day the public will again be strongly attracted by conditions here, and investments in propositions of unquestionable merit will freely follow.

While the records and the fields are strewn with the wrecks of fortunes and investments of overzealous speculators, the fact remains that a vast oil industry has been established on a basis of permanency, and it is also true that money in large quantities has been and is being made all over the field. Beaumont itself has been benefited enormously, the taxable valuation having gone from about \$4,000,000 in 1900 to more than \$25,000,000 at the present time, and instances are numerous where men have made and retained thousands and even hundreds of thousands of dollars. Beaumont is dotted with fine new brick and stone buildings, every one a monument to the money which the oil boom made and left behind, and while there are reams of oil stocks the country over which could only be sold by the pound as waste paper, there have been and are some few dividend-payers among the bunch, and furthermore the production, refining and marketing of oil has been reduced to something like an exact science. There is "wildcatting" or prospecting going on all over Texas and Louisiana in every likely and many unlikely places, and at Sour Lake, Saratoga and such fields as have been demonstrated to be fine producers local men and speculators are among those who are driving wells and taking a chance; but more and more the oil business is drifting into strong hands and under the control of men and corporations who are strictly business. There will be less money made and much less lost by the public at large, and it remains to be seen whether this will not be a distinct advantage to the field. But with careful business management of the oil industry as the rule it looks like the investing public would be assured of greater safety in the future, and that such assurance could scarcely be otherwise than advantageous to the entire section must be conceded. Therefore the drifting of the business into a few hands may not prove to be an altogether unmixed evil. With the gradual exhaustion of the oil fields of the North it is certain that the steady development of the Southern fields will proceed. Carefully-made investments should therefore bring satisfactory returns, and it would seem that the public still has an excellent chance of getting a share of the profits in Southern oil where the character and ability of company managers is assured.

No asphalt is produced, and it is not at present contemplated to treat the oils for asphalt. It is agreed that this work is at present not beyond the experimental stage, although the plant is being profitably operated to about its capacity, but the oils being new to the trade, it is proposed to keep on trying till it has been demonstrated that the best possible results are being obtained. It is declared the Texas oil presents no difficult problems; it is simply a different proposition, and one which it will take time to thoroughly work out. The Security Company owns ninety acres of ground, and the buildings and all features of the plant are models of their kind. Coffeyville (Kan.) brick are used in the construction; the roofs are steel truss, tile covered, and the fire-brick used is of the best St. Louis make.

These are the large plants, but there are others, either under way or in operation, which add to the importance of the industry. Among them are those of the Texas Company, Port Arthur; the M. C. Williams Colonial Oil Co., Port Arthur; the United Oil & Refining Co., the Union Oil Refining & Fuel Co., the National Refining Co., the Great Southern Refining Co. and the Central Asphalt & Refining Co. of Beaumont. The Great Southern, which has three stills of 200 barrels each, and turns out 100 barrels of various grades each day, has a patent process by which the oils are separated in the vapor state. A run is made in nine or ten hours, and eight runs are obtained in a week.

The Central Asphalt & Refining Co., the institution of which Senator Chas. A. Towne was at the head, and which was organized to utilize a secret process, is now in the hands of a receiver. The others are either in operation or are preparing to operate in a more or less extensive way.

Of the oil-producing companies now in this field, the bulk of the business is done by the J. M. Guffey Petroleum Co., the Texas Company, the Higgins Oil & Fuel Co. and the Heywood Oil Co. Of the 15,000 to 18,000 barrels of oil produced daily on Spindle Top, the Guffey Company probably produces from 10,000 to 12,000. Owners of the original Lucas gusher, they have been continuous producers since the field was brought in. They have holdings of 3000 acres on the hill, and, unlike the ordinary run of producers here, they operate almost exclusively on royalties—one-eighth and one-tenth. Their holdings on Spindle Top surround the pepper-box which frantic outsiders made of a portion of the hill, and they go ahead putting down new wells only as occasion justifies. They frequently strike a gusher still, and of their thirty producing wells on the hill, some of them are now flowing from 600 to 1000 barrels a day. The original Lucas gusher, by the way, is long since a thing of the past, and not even a tablet marks the site of its former grandeur. It had a life of some fifteen months, and after producing 2,000,000 barrel of oil or more it got choked up and was abandoned.

The Guffey Company has a lease on 800 acres at Sour Lake, on which are nine wells, two or three of them among the good ones, but it is not drilling actively there now. Through its own pipe line it is running 600 barrels of oil per hour out of Sour Lake, some of which it contracted for at the time of low prices at ten cents a barrel. It owns in fee-simple forty acres in the heart of the proven territory at Saratoga, but is not drilling there yet.

The company owns fourteen iron tanks at Spindle Top, with a total capacity of 666,000 barrels. At Port Arthur it has twenty-one tanks, with 1,160,000 barrels capacity. It has two 25,000-barrel tanks at Sour Lake, and is building nine others.

there of 55,000 barrels capacity each. It has twenty miles of six-inch pipe line from Spindle Top to the Gulf Refinery at Port Arthur, and has a lease on the National pipe line, covering the same ground. It built the first pipe line into Sour Lake from Lucas Station (Spindle Top), twenty-four miles in length, and is surveying a line into the Saratoga field, ten and one-half miles beyond Sour Lake. It owns fifteen steamers, which run from Port Arthur to London and New York, or anywhere desired. Two of them are the finest afloat, with 34,000 barrels capacity each. It also owns a barge which carries 40,000 barrels. It has forty tank cars in service here, and sixty which have been sent north. It has a station at Bayonne, N. Y., for storage and distribution, and is building another at Boston.

In addition, this company has just secured at a bargain control of everything belonging to the Star Petroleum Co., a ten-million-dollar organization that has spent some \$2,000,000 in the field. These properties and equipments, for which only \$300,000 was paid, include some thirty-five miles of pipe line, twenty-five producing wells, fifty tank cars, loading racks, rigs, storage tanks, etc., an enumeration of which recently appeared in the Manufacturers' Record.

J. M. Guffey is president of the company, and his associates, including W. L. Mellon, vice-president; R. B. Mellon, treasurer; George L. Craig, general manager, and C. F. Farren, secretary, are mainly Pittsburg people, although the large list of stockholders includes people from all over the country. The company is capitalized at \$15,000,000, and there is an issue of \$5,000,000 bonds. No dividends have yet been paid stockholders, but the assurance is given that when the property has been more completely developed and the point reached where dividends are in order, something like 50 or 100 per cent. may be declared.

It is well to bear in mind that all this enormous property has been created since the Lucas gusher was struck, January 10, 1901. At that time there was not a foot of pipe line here, not a tank car, tank steamer or even a storage tank that could be utilized. In addition to this company's holdings and equipment, some twenty-eight other companies have steel tankage in Texas alone with a total capacity of over 10,000,000 barrels; the earthen tankage in the Texas field will foot up over 5,000,000 barrels; there have been shipments by boat of over 10,000,000 barrels from Port Arthur and Sabine Pass, and there are being produced in the Texas-Louisiana fields today at least 80,000 barrels of oil every twenty-four hours. With the developments at Sour Lake, Saratoga and Jennings, and the prospecting which continuously goes on, it is likely that this production will be maintained, if not increased, for an indefinite number of years. Is it any wonder, then, that the Texas people, who know these things, are surprised that the investing public, once so eager to grasp at the promise, should show apathy now, when so much has been fulfilled?

ALBERT PHENIS.

The cottonseed-oil mills of Memphis have begun their season with bright prospects. The seed already put upon the market has been of good quality, and the season opened with prime crude oil quoted at thirty-one cents, against twenty-nine cents the same period last year.

Plans are being made for the union into one body of the various rice-canal interests of Texas, which have invested several million dollars in extending the rice-growing territory of the coast country.

### MINING IN THE SOUTH.

#### Opportunities Still to Be Seized in the Piedmont Region.

##### Editor Manufacturers' Record:

There lies at the southwest end of the Blue Ridge mountains a region so rich in minerals, so far as surface indications are concerned, that it is beyond belief that the attention of the mining world has not been attracted to it before. This district is nearly equally divided by the line between North Carolina and Georgia, and besides being covered with a magnificent growth of timber, it is prolific in outcroppings of mineral-bearing ores. The minerals include gold, copper, nickel, iron, asbestos, corundum, talc, marble, chromite of iron, titanium and others. True it is that the greater part of the showing is only on the surface, but these surface outcroppings are so large and extend throughout the region in such regular formation for many miles as to leave no possibility of a doubt that huge bodies of pay ore can be uncovered within a reasonable depth at comparatively little expense.

To commence with the precious metals. Gold mining has been carried on for many years in Northern Georgia, and I am sorry to say the results have not been as satisfactory as could have been wished. But the fault does not lie at the door of the auriferous deposits, but rather at that of the promoters of the various schemes. The fact that a paying placer mine has been found does not warrant the erection of an expensive mill the moment that the vein of quartz, which was the mother of the deposit, has been uncovered. This mistake, due to ignorance of geology, has led to many failures in quartz mining. For ages past this region has been subject to erosion, and it is universally acknowledged that the surface of the Blue Ridge range has been scraped off to a depth of at least 30,000 feet. (Some geologists claim 60,000 feet.) At any rate, whatever the depth, the gold, by reason of its great specific gravity, remained in the gulches and streams, while the lighter particles of the country rock and vein matter were washed down to the Gulf of Mexico, or rather to the old ocean which now forms the States of Mississippi and Alabama.

Another cause of failure in many instances has been a too great hurry in getting returns from the investment, resulting in the erection of the wrong kind of reduction works. Nearly all the mills now standing idle are of the free process kind, where nothing but copper plates and quicksilver are used to save the values, whereas either cyaniding or chlorination mills should have been erected at the commencement. Many mills have been built before any mines were discovered. This does not only apply to gold; witness a \$250,000 failure where something like that sum was thrown away on a so-called corundum proposition.

In spite of all these setbacks, there is an enormous amount of gold ore awaiting removal and reduction in this section, and all that is needed in order to ensure success is simply "mining on a business instead of a speculative basis." There are many fine opportunities now open in this section. A personal visit of inspection will do more than all the correspondence in the world, and I will undertake to ride over the country with any engineer or expert who shall take the time to visit this country.

There are at least two great copper-bearing zones running through this region. The ore is principally a pyrite, bearing indications of secondary enrichment in the form of chalocite. The outcroppings are strong, and bear well in the red metal.

The ore can be easily concentrated, and water-power is always available. Good tunnel sites are plentiful, and all outward indications point to the possible formation of a prosperous mining district.

A large, well-defined vein of nickel ore, accompanied by a parallel vein of manganese, runs for miles through Union and Towns counties. This nickel is high grade, and rich enough to haul to the nearest railroad point. Considering the high price of this metal, there is abundant opportunity for any independent manufacturer of steel to avail himself of a supply of nickel. The properties, of course, are all owned, but I believe the terms are reasonable.

There is no doubt that a railroad connecting Blue Ridge, Ga., with Atlantic coast towns will be shortly built through the center of this rich district by the end of 1904.

In the neighborhood of Young, Harris and Blairsville are huge deposits of bauxite, from which metallic aluminum is manufactured. The ore is of the same nature as that from Western Georgia, which the Norton Emery Wheel Co. utilizes for the manufacture of aluminum at Niagara Falls. In addition to the bauxite, this region contains the few good corundum deposits which are not already controlled by the abrasive trust. The corundum mining industry has received somewhat of a black eye in this neighborhood by reason of the fact that some mills have been built by people who could not tell corundum from chalk on lands which did not contain the mineral. Besides that, prospectors who knew naught of minerals have been bothering the manufacturers all over the country by sending in batch after batch of albite, margarite, oxide of titanium and other crystalline rocks to be tested for corundum. Nevertheless, there is plenty of corundum in paying quantities awaiting development. The Colorado Corundum Co. is developing two promising looking properties, one in Clay county, North Carolina, and the other four miles to the southwest in Georgia. There are three veins of corundum bearing strata, all running parallel to each other (northeast to southwest), of which that on the north is the best. This mineral is quoted at from seven to ten cents per pound, and there is a continual demand for it, in spite of the report that the artificial product called corundum has taken the place of the natural abrasive. All that is necessary to mine corundum successfully is to avoid "wildcat schemes," to mine intelligently along business lines, and to beware of erecting a mill until at least a three years' supply of ore is guaranteed by development. All of which is easy if the rules are only followed. The abrasive trust controls many mills along these veins, but work is only being pushed at a few locations, it apparently being the policy of these people to decrease production in order to keep up the price to the consumer. Nevertheless, there are thousands of tons of corundum yet to be found in North Georgia.

I neglected to state in connection with my remarks on gold mining that there are several promising placer mining propositions yet awaiting development here, where the yellow metal can be washed from the gravel with a very small outlay at the commencement.

A. M. GRAHAME.

Hiawassee, Ga.

The Atlantic Coast Lumber Co. shipped last week from Georgetown, S. C., 300,000 feet of lumber for Bathurst, on the west coast of Africa.

During September Florida phosphate rock shipped through Savannah, Ga., for foreign ports amounted to 18,677 tons.

### RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

#### HOUSTON TO SOUR LAKE.

##### Mr. Ed Kennedy Describes His Proposed Electric Railway.

Mr. Ed Kennedy writes from Beaumont, Texas, to the Manufacturers' Record concerning the proposed electric railway between Sour Lake and Houston, Texas, as follows:

"The road is to be known as the Houston, Liberty & Sour Lake Interurban Line, covering a distance of fifty-seven miles, or eight miles less than the distance on the Southern Pacific between those points. The starting-point is Houston, a city of 100,000 people. For the first ten miles east from Houston the line runs through one of the finest truck-farming countries in the world that is developing very rapidly; the next ten miles is through a fine pine forest, but as yet none of the timber has been cut; then for the next ten miles it runs through the rice belt, one of the greatest rice centers in the world; then comes Liberty, the county-seat of Liberty county, a place of 3000 inhabitants. The line will also hit other towns with a population of from 500 to 1000 people. From Liberty the line runs northeast, leaving the Southern Pacific to the south. This is also a good rice country and truck-farming region until we come to Big Hill, ten miles out, where will be one of the great oil fields that will equal Sour Lake or Spindle Top and the great gushers of Russia. There are contracts for ten wells to go down at an early date. Ten miles further east brings us to Sour Lake, a city of 7000 population—a thriving place that is just in its infancy.

"At Sour Lake connection is made with the Beaumont & Sour Lake electric road, and also with the Saratoga line that is going to be built. The tracklaying on the Beaumont-Sour Lake line is progressing just as fast as men and money can make it. This line was promoted by me, but it has no connection with the new plan, only it will be a good feeder for my road, and the Houston line will also be a good feeder for the Beaumont & Sour Lake road, which will connect up all the leading towns, of which Beaumont stands in the lead, a thriving city of 30,000 population, with seventeen passenger trains every twenty-four hours, and also with one of the greatest refineries in the world that is running night and day. There are also seven saw-mills running night and day tributary to the city, and massive brick buildings are going up seven and eight stories high. It is a great rice center, where there are mammoth rice mills that pay the top price for rice, four national banks, and all doing a good progressive business.

"As for the right of way, I have that secured for pretty much all of the way. The line will be built in first-class shape. There is plenty of gravel along the track for ballast, and timber sufficient for bridging and piling. There will be 72-pound T rail used, and the track will be built for the traffic—passenger, freight and express. The bonds have been contracted for, and will be handled by the Municipal Bond & Securities Co. of Cincinnati, Ohio."

#### Eureka Springs to Huntsville.

Mr. J. A. C. Blackburn of Rogers, Ark., writes the Manufacturers' Record concerning the plan to build an electric railway from Eureka Springs to Huntsville, about thirty miles. "The road," says he, "can be built very cheaply, as it follows a dividing ridge for almost the entire dis-

tance. Only one bridge will be necessary. It is also contemplated to extend the road fifty or sixty miles further southeast beyond the head of Buffalo. It is estimated that the line will pay well, as it will open up a fine timber and fruit belt."

#### WABASH EASTERN LINE.

##### Sub-Contractors on the Cumberland and Cherry Run Connection.

On the line to connect the West Virginia Central and the Western Maryland Railroad between Cumberland and Cherry Run work has begun about four miles east of Cumberland, Md. The subcontractors from Cumberland eastward are as follows: Cumberland to Welton tunnel, Doyle; Welton tunnel and seven miles east, M. Elmore; then come the Waltz-Reese Construction Co., J. W. Knuckles, N. Roman, C. H. Locher, M. J. Moran and Patrick Gibbons, the subcontract of the latter extending to Sideling Hill creek, which marks the eastern end of the contract of McArthur Bros. and the Kilpatrick Bros. and Collins Construction Co. The contract of the Degnon-McLean Construction Co. extends from Sideling Hill creek to Cherry Run.

Between Cumberland and Sideling Hill creek eight bridges will have to be constructed at different points over the Potomac river. These structures will average 600 feet in length, with three piers in addition to the abutments. There will also be five tunnels of varying lengths, as follows: Knobley, 750 feet; Welton, 1350 feet; Kessler, 1200 feet; Stickpile, 1700 feet, and Indigo, 4300 feet. The latter will be near Little Orleans. The bridge work has been sublet to Winston & Co. and Locher of Massachusetts, but McArthur Bros. themselves will do considerable of the tunnel work. Between Sideling Hill creek and Cherry Run, on the contract of the Degnon-McLean Construction Co., it is stated that there will not be any tunnels, and but few heavy cuts.

#### After the Ashland Belt Line.

According to advices from Huntington, W. Va., the Cincinnati, Hamilton & Dayton, the Detroit Southern and the Chesapeake & Ohio lines are each endeavoring to secure control of the Ashland Coal & Iron Railway Co. of Ashland, Ky., which has a belt line around that place and has twenty-two miles of line from there to Boyd county, where the company owns 25,000 acres of coal and iron lands.

It is further reported that a syndicate composed of Robert Peebles, J. A. Kelley and Col. Frank C. Cates of Ashland, John Peebles of Portsmouth, the Joseph C. Butler heirs of Cincinnati and others have acquired a majority of the stock. The annual election is to take place on October 21.

Should the Cincinnati, Hamilton & Dayton or the Detroit Southern obtain possession of the Ashland Coal & Iron Railway Co., it is believed that they would extend from Ironton, Ohio, to Ashland, and thence along the Big Sandy river to a point in the coal region of Eastern Kentucky, where the Northern Coal & Coke Co. will, it is stated, construct an immense coke plant. The Chesapeake & Ohio is already building a line to serve this new enterprise.

#### The 'Frisco's Progress.

Vice-President Winchell of the St. Louis & San Francisco Railroad, who is also general manager of the system, is quoted as saying that the company is now receiving the first of a lot of 100 locomotives ordered some time ago, which will increase the daily mileage of freight cars about 20 per cent., which would be equivalent to adding nearly 5000 cars; the

empty mileage has been cut down to less than 30 per cent. Concerning the Kansas City & Birmingham division, Mr. Winchell says the westbound tonnage is a little heavier than the eastbound, and that the company has felt no reduction in the pig-iron business nor a falling off in the movement of pig-iron. The Birmingham district is a direct producer of various kinds of manufactured freight, and the 'Frisco carries West much pig-iron bound for Chicago. He further says that the St. Louis, Memphis & Southeastern between Cape Girardeau and St. Louis will be finished by the end of the year.

#### "Cotton Belt" Report.

The twelfth annual report of the St. Louis Southwestern Railway Co., "Cotton Belt," including the company's lines in Texas, shows for the year ended June 30, 1903, gross earnings \$7,278,574, an increase of \$11,315 as compared with the next preceding year; operating expenses \$5,256,163, increase \$83,006; net earnings \$2,022,411, decrease \$71,781; all other receipts \$182,602, increase \$93,583; total income \$2,205,013, increase \$21,802; surplus after payment of interest, rentals, taxes, etc., \$694,834, decrease \$33,354. The balance to the credit of net income as shown by the profit and loss account is \$1,677,008, an increase of \$219,081.

It is stated that the increase of more than 1½ per cent. in operating expenses was due in part to rainy weather, which required the employment of extra gangs to keep the track in condition, but the principal cause of the increase was a large expenditure for labor in putting in heavier rail on 272 miles of line. The higher cost of labor and supplies also contributed to the increase.

During the year the company completed its Dallas branch from Noell Junction to Dallas, Texas, a little over twelve miles, and it also purchased control of the Dallas Terminal Railway & Union Depot Co., with nine and one-half miles of track. It has enlarged and extended the yards and erected new passenger and freight station buildings. The Texas & Louisiana Railroad from Lufkin to Monterey, Texas, twenty-two miles, was also acquired, and an extension of about four and one-half miles is now being made.

Mr. F. H. Britton, vice-president and general manager, says in conclusion:

"The growth of the country tributary to the company's rails during the past year has been very noticeable. The management has given due encouragement to immigration, as well as to new enterprises locating in the territory served by the system, and good results will follow a continuance of this policy. Fruit and vegetable growing along the line is now carried on extensively under the direction of expert agriculturists, and with marked success. The natural resources of the section traversed by the line, which are susceptible to further development as the country expands, insure a stable traffic movement for the future."

"The outlook for business during the ensuing year is quite satisfactory at this date. Encouraging reports of the coming cotton crop have been received from the heavier producing sections along the line, and except for some slight losses in a few counties in Texas from the ravages of the boll-weevil, the crop bids fair to exceed those of the past few years."

#### Atlanta to Marietta.

The Atlanta & Marietta Electric Railway Co. has been granted a franchise to build an electric railway between Atlanta and Marietta, Ga., about eighteen miles. The line is to run along the Howell Mill road from the city limits of Atlanta to Rossers Store, five miles, and thence to

Marietta. Work is to begin within six months, and the road is to be completed within eighteen months. Bridges are to be built over the Seaboard Air Line tracks and also over Peachtree creek. In addition to conveying passengers the railway will be permitted to transport freight, and also to conduct an express service. Rights of way have been secured from a number of property-owners in Fulton county, and the deeds conveying them to the railway company have been filed. Deeds for the right of way in Cobb county are also to be filed there. Frank L. Cooke of New York, W. R. Powers, attorney, of Marietta, Ga., and B. M. Hall of Atlanta, engineer, represented the company before the county commissioners when the franchise was granted.

The Atlanta Interurban Railway Co. is also to build a line from Atlanta to Marietta, and has some of its grading completed.

#### A Valuable Book.

The Official Guide of the Central of Georgia Railway Co. is a most attractive book of about 250 pages, abounding in valuable information concerning the industries of the States traversed by the system. Under the caption of "Southern Opportunities for the Investor and Settler" is presented a richly-illustrated description of many of the manufacturing, agricultural and commerical advantages in the company's territory. The illustrations, which are superior half-tones, include scenes in Savannah, Augusta, Macon, Atlanta, Birmingham, Athens, Montgomery, Columbus, Rome and Chattanooga, and in many towns in the intervening country. The iron and steel, the coal and coke, the cotton, the agricultural and other industries are all represented in the pictures. The volume is handsomely bound in red cloth, with the name of the company in gold lettering upon the cover.

#### Royal Blue Book.

The Book of the Royal Blue for October presents another article on the Louisiana Purchase Exposition, this one being devoted to an illustrated description of the machinery building. The new union station to be erected at Washington, which is another great structure in the plans for which the public is generally interested, is also described, and two pictures, one of the interior and the other showing the exterior of the depot as it will appear, accompany the reading matter. There are two other very interesting articles, one describing the historic city of Frederick, Md., with pictures of the Key Monument and scenes in and around the city, and the other being devoted to the equally historic village of Bladensburg, near Washington, D. C. Several other entertaining contributions in prose and verse complete the book.

#### A Georgia Line to Extend.

The Albany & Northern Railroad has amended its charter to permit of an extension being made from Cordele to Jeffersonville, Ga., via Hawkinsville, a distance of sixty miles. The Albany & Northern now extends from Albany, Ga., northeast to Cordele, which is a junction point of the Seaboard Air Line, the Georgia Southern & Florida and the Atlantic & Birmingham roads. If extended northeast via Hawkinsville to Jeffersonville it would connect at Hawkinsville with the Southern Railway, the Wrightsville & Tennille and the Hawkinsville & Florida Southern. Jeffersonville, the proposed northern terminus, is on the Macon, Dublin & Savannah Railroad. T. Edward Hambleton of Baltimore is president of the line.

#### May Soon Build.

George H. Blackwell, contractor on the South & Western Railway, is reported as saying that work may soon be started on an extension northwest from Johnson City, Tenn., towards the Virginia coal fields. If extended northwest to Gate City, a distance of twenty-five or thirty miles, this line would make a connection there with the Virginia & Southwestern Railway, which extends as far as Big Stone Gap, whence a comparatively short road would reach the Tom's Creek region, in the mines of which Mr. George L. Carter, president of the South & Western, and associates are interested. Mr. Carter is also a director in the Virginia & Southwestern.

#### Railroad Notes.

Howard Gould has been elected a director of the St. Louis Southwestern Railway to succeed Thomas T. Eckert, resigned.

The completion of the Indian Territory Traction Co.'s line and its opening to the public is announced at South McAlester. Extensions are, however, to be built. Lawrence P. Boyle and others are interested.

The Tennessee Central Railroad has completed its line between Nashville and Clarksville, and as soon as the bridge over the Cumberland river at Nashville is finished trains will run through between those points.

Vice-President J. T. Harahan of the Illinois Central Railroad says that eighty-five new engines have been ordered, many for delivery this fall and all to be received by May 1 next. The double-tracking of the road is being pushed.

An unconfirmed report from Hawkinsville, Fla., says that the Brunswick & Birmingham Railroad has purchased the Hawkinsville & Florida Southern Railway, and proposes extending it to Perry, a distance of eighteen miles.

The purchase of the Tennessee Northern Railway by the Knoxville & Ohio Railroad, which is the Southern Railway system, has been ratified. This extends the main line ten miles to Lafollette, Tenn., and through valuable mineral land.

President J. T. Jones of the Gulf & Ship Island Railroad writes from Gulfport, Miss., to the Manufacturers' Record denying the report that he is interested in the Natchez & Gulf Railroad. He says that it is entirely without foundation.

A dispatch from Vinita, I. T., says that a railroad is to be built from South McAlester, I. T., to Vian, on the St. Louis, Iron Mountain & Southern, and thence to Joplin, Mo. Neither the name of the company nor the names of those interested are given.

A railway survey is reported to have been made from Mendota, on the Virginia & Southwestern Railway, northeast along the Holston river to Narrows, on the Norfolk & Western Railway, about 107 miles. The line passes through valuable timber and mining properties.

Vice-President Julius Kruttschnitt of the Southern Pacific Company says that it has received all except twenty out of 106 locomotives ordered; also that about one-half of a lot of 125 passenger cars have been delivered, and that 4500 freight cars have lately been added to the equipment.

The Eufaula Railroad Co. has been granted a franchise at Eufaula, Ala. It is proposed to build a line as far as Abbeville, twenty-five miles, in addition to building an electric railway system in the city. The company is composed of J. P.

Foy, B. B. McKenzie, R. A. Ballowe, C. A. Martin, H. C. Holleman and L. H. Brassell.

The Baltimore & Ohio Railroad is to begin using the Pinto cut-off, which will avoid running through freight trains via Cumberland, Md., and will also save twelve miles in distance, as soon as the new shops and roundhouse are built at Keyser, W. Va. These buildings are to be completed within a few weeks. The roundhouse will have twenty-four stalls.

The incorporation of the Paden City, Middlebourne & Salem Railway Co. of Paden City, W. Va., is announced to build an interurban railway connecting the three towns. It would be about thirty-five miles long. The incorporators are Thos. A. Watkins, George R. Wallace of Pittsburgh, Pa.; Robert Miller, Paden City, W. Va.; George E. Work of Sistersville, and E. L. Robinson of New Martinsville.

The incorporation of the Shawnee & Northeastern Railway of Shawnee, O. T., is, according to a dispatch from Guthrie, where the charter was granted, for the purpose of building a line from Wichita Falls, Texas, to Claremore, I. T., about 300 miles. The incorporators are A. E. Nelson, C. W. Kerfoot, H. G. Beard, B. B. Blakney, W. H. Maben, W. F. Callahan, M. J. Bentley and D. W. Bell, all of Shawnee.

The Southern Pacific Company is extensively improving its line (the Galveston, Harrisburg & San Antonio Railway) between San Antonio and El Paso. Curves are being eliminated, steel bridges and stone culverts are being put in and wells are being dug at Comstock to furnish water for the locomotives. This work of improvement will, it is stated, be pushed east and west, so that the running time between New Orleans and San Francisco will be reduced eight or ten hours.

#### American Coal for Europe.

Mr. W. C. Jutte of a Pittsburgh firm of river coal shippers, after a trip abroad, is of the opinion that there is a good market for American coal in the Old World, as well as in Mexico and South America. In an interview in the Pittsburgh Chronicle-Telegraph he suggested the establishment of a line of coal vessels, and said:

"If some one would operate a line of six-masted sailing vessels, for instance, between American ports and Europe, I think a very profitable business can be established. It does not require a large amount of money to operate vessels of this class, because they do not use fuel and the vessels carry very small crews. This type of vessels hold about 10,000 tons. It costs more money to mine coal in England than it does in Pennsylvania, because the coal is mined under difficulties, some operators there being compelled to bring their coal from 3000 to 4000 feet below the surface. The rapid improvement being made in the method of mining in America is bound to reduce the cost of production, and under certain mining agreements there is no question but that coal can be sent abroad and sold at as cheap a rate as the foreign product with which it would have to compete."

#### Vehicles for South Africa.

J. R. Wills, Jetty street, Port Elizabeth, Cape Colony, South Africa, writes to the Manufacturers' Record that he is interested in importing American carts, carriages, buggies, etc., and would be glad to see catalogues of American export houses in those lines. He adds that the lack of parcel post arrangements with the United States is a great drawback to trade with Cape Colony.

## TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

#### Texas' Textile School.

All arrangements have been completed for establishing a school in textile instruction at the Agricultural and Mechanical College, Dallas, Texas. The last legislature provided funds for the erection of this building. Plans for the structure have been accepted as prepared by J. E. Sirrine, a leading Southern mill architect, of Greenville, S. C. They show a structure of hard brick two stories high, 54x174 feet in dimension, estimated to cost \$25,000. A complete equipment for manufacturing cotton will be installed, and about 100 students will be afforded instruction. This makes the fifth textile school in the South, the States of North Carolina, South Carolina, Georgia and Mississippi having already established courses in cotton manufacturing, as has been previously detailed from time to time in the Manufacturers' Record.

#### The Capitola Mill.

Mention was made last week of the incorporation of the Capitola Manufacturing Co. for the purpose of developing water-power and building a cotton mill at Marshall, N. C. Organization has since been effected with W. J. McLendon of Wadesboro, N. C., as president and general manager, and the following directors: Messrs. C. B. Mashburn, N. H. Rice, J. H. White, J. R. Swann, S. Franklin, J. F. Redmon and W. J. McLendon. The company estimates that about 2000 horsepower can be obtained from its water-power property, and the mill will be designed for an equipment of 15,000 spindles and 450 looms. The main building will be 100x200 feet in size. John J. Dalton of Asheville, N. C., has done the engineering work and prepared estimates for the enterprise. The company will be capitalized at \$250,000.

#### Combed Sea Island Yarns.

Atlantic & Gulf Mills, Quitman, Ga., was mentioned last week as having decided to double its plant, increasing capital from \$100,000 to \$200,000. It can now be stated that buildings will be erected to accommodate the new machinery (over 5000 spindles), but it has not been decided whether they will be built by contract or day labor. Construction work will probably begin in December. The addition will run on combed Sea Island yarns, and, it is claimed, will be the first mill of this kind built in the region where Sea Island stable grows. The present 5000 ring spindles run on upland cotton, making hosiery yarns.

#### The Cotton Movement.

In his report for October 9 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during the thirty-nine days of the present season was 1,275,244 bales, a decrease under the same period last year of 534,334 bales. The exports were 504,153 bales, a decrease of 316,780 bales; takings by Northern spinners 169,019 bales, an increase of 6549 bales; by Southern spinners 188,945 bales, a decrease of 54,220 bales.

#### Textile Notes.

John Jenings of Hillsboro, Texas, proposes organizing company to establish a knitting mill at Cleburne, Texas.

Jonesboro Yarn Mills, Jonesboro, Tenn., a \$25,000 plant, is about to resume operations, after an idleness of about five months.

Messrs. Stephen S. Holt, Willis H. Austin and Allen K. Smith of Smithfield, N. C., have incorporated the Holt Cotton Co. to manufacture and deal in cotton, etc. The capital stock is \$100,000.

Messrs. John W. Knight, E. B. Hulsey, V. P. Randolph, B. H. Morehead, J. P. Sugg and H. A. Sugg have incorporated the Tennessee Cotton Co. at Dyersburg, Tenn., with capital stock of \$25,000.

Moore Cotton Mills of Liledown, N. C., has resumed operations, and contemplates installing some additional machinery, besides a complete dyeing plant. The mill now has 2000 ring spindles and ninety-six looms.

Pennant Knitting Mills, Shepherdstown, W. Va., is improving its plant by the addition of new machinery. The company is now employing about thirty operatives and making large shipments of fine hose-stry to leading cities.

Williamsburg (Va.) Knitting Mill Co. will increase capital from \$50,000 to \$80,000 in order to enlarge its plant. Messrs. E. W. Warburton and H. S. Bird have increased their holdings of stock and now control the enterprise.

Hazelhurst Cotton Mill Co. of Hazel, N. C., reported incorporated last week, is the incorporation of the Hazelhurst Cotton Mills, an established plant of about 1000 spindles. The capacity is being doubled by the installation of second-hand spinning machinery.

It is rumored that the Merrimack Manufacturing Co., Huntsville, Ala., and Lowell, Mass., will erect additional mills at Huntsville, work to begin next spring. The company is now pushing to completion additional mills to have 75,000 spindles and 2400 looms.

The Farmers' Local Union of Myrtle Springs, Texas, has recently adopted a plan to establish cotton mills. The system comprises a series of fractional payments by each subscriber as the work on a mill progresses. No arrangements have been completed for the first plant.

A woolen goods manufacturer of Springfield, Mass., has addressed the Board of Trade at Little Rock, Ark., relative to establishing a woolen mill in that city. Possibly the manufacturer in question will remove his established plant to form the nucleus of the new enterprise.

Columbia Manufacturing Co., Ramseur, N. C., will enlarge its cotton factory. An additional building, two stories high, 50x88 feet, will be erected and equipped with machinery for manufacturing colored goods, plaids, etc. The company's present plant has 11,072 spindles and 350 looms.

Knoxville (Tenn.) Knitting Mills Co., mentioned last week, has increased capital stock to \$50,000 and will enlarge its plant. Contract will be awarded for the installation of 150 additional knitting machines, with ribbers, loopers, etc., to match. The output is fine underwear, ultimate capacity to be about 3000 dozen per day.

The reports regarding South Carolina capitalists having decided to develop Bull Sluice Shoals, near Toccoa, Ga., arose from the fact that a well-known cotton manufacturer of South Carolina has purchased water rights on the Carolina side. There is no present intention on the part of the purchaser to institute developments.

#### QUOTATIONS OF COTTON YARNS.

By Buckingham, Paulson & Co., New York, Philadelphia and Chicago,

October 13.

No. 10s-1 and 12s-1 warps.....	16 1/2
No. 14s-1 warps.....	17 1/2
No. 16s-1 warps.....	17 1/2
No. 20s-1 warps.....	18 1/2
No. 22s-1 warps.....	18 1/2
No. 26s-1 warps.....	19 1/2
No. 6s to 10s yarn.....	16 1/2
No. 12s-1.....	16 1/2
No. 14s-1.....	17 1/2
No. 16s-1.....	17 1/2
No. 20s-1.....	18 1/2
No. 22s-1.....	18 1/2
No. 26s-1.....	19 1/2
No. 8s-2 ply soft yarn.....	15 1/2
No. 10s-2 ply soft yarn.....	16 1/2
No. 8s-2 ply hard.....	15 1/2
No. 10s-2 ply hard.....	16 1/2
No. 12s-2 ply.....	16 1/2
No. 14s-2 ply.....	17 1/2
No. 16s-2 ply.....	17 1/2
No. 20s-2 ply.....	18 1/2
No. 24s-2 ply.....	19 1/2
No. 26s-2 ply.....	20 1/2
No. 30s-2 ply yarn.....	21 1/2
No. 40s-2 ply.....	26 1/2
No. 2s-3, 4 and 5 ply.....	15 1/2
No. 20s-2 ply chain warps.....	18 1/2
No. 24s-2 ply chain warps.....	20 1/2
No. 26s-2 ply chain warps.....	20 1/2
No. 30s-2 ply chain warps.....	21 1/2
No. 16s-3 ply hard twist.....	17 1/2
No. 20s-3 ply hard twist.....	18 1/2
No. 26s-3 ply hard twist.....	20 1/2

Prices nominal; market dull.

#### Break in Southern Iron Association.

The Sloss-Sheffield Steel & Iron Co. and the Alabama Consolidated Coal & Iron Co. have withdrawn from the Southern Iron Association, which will probably mean the practical dissolution of that organization. A representative of the Sloss-Sheffield Company is quoted as saying:

"We learned that the Alabama Consolidated Coal & Iron Co. had withdrawn from the association, and we decided to do the same, as we had proof that certain concerns were cutting prices. We gave fair warning of the possible action we would take at the meeting held early this month. We have always kept faith with the association, never having sold a pound of iron below the schedule. The withdrawal of our company and the Alabama Consolidated practically means the disruption of the association. I cannot say what effect the dissolution will have on iron prices. I believe, however, that consumers will be more inclined to come into the market."

#### Blast-Furnace Statistics.

In its weekly review the Iron Age says:

"Our monthly blast-furnace statistics, which represent conditions as prevailing on October 1, deal with affairs as existing before the measures to restrict pig-iron production were put into effect. They must therefore not be taken as indicating the present state of the pig-iron industry. The figures show that the production of coke and anthracite pig-iron in September was 1,556,717 gross tons, as compared with 1,571,126 tons in August. The production was therefore at practically about the same rate during both months. During September the number of coke and anthracite furnaces blown out was twenty-seven, as compared with seven blown in, showing a net reduction of twenty. This was sufficient to reduce the weekly capacity of active coke and anthracite furnaces from 360,197 tons on September 1 to 354,474 tons on October 1. A still greater reduction is shown in comparison with the figures for June 1, when the capacity of the active furnaces was 388,178 tons. Since the beginning of the current month nine blast furnaces are stated to have been blown out in the Mahoning and Shenango valleys, as well as quite a number of stacks in other parts of the country, and still more furnaces are being prepared for blowing out. The movement to restrict production is therefore fairly under way."

Ernst Bunge, 124 Boulevard der Strasbourg, Havre, France, writes to the Manufacturers' Record that he desires to get into communication with American exporters of dried fruits and lubricating oils with a view to becoming their agent.

The monthly shipment of gold bullion from the Haile gold mine in South Carolina received last week at Charlotte, N. C., was in one brick valued at about \$10,000.

A board of trade is being organized at Laurel, Miss., and will work systematically to attract investors and farmers to that neighborhood.

## MECHANICAL.

## Carborundum Products.

The development and manufacture of carborundum at Niagara Falls has been one of the most interesting and important industrial advances of recent years. Immediately following the solution of the problem of commercial manufacture of carborundum the question presented itself of cementing or binding the granular material into forms and shapes convenient for grinding purposes, especially in forming wheels to be used as a substitute for emery and corundum. A careful investi-

the finished articles in a plant that is as complete as science and art, supported by unlimited capital, can make it. An accompanying illustration presents a view of carborundum products.

The Carborundum Co. has branches in all the leading cities and towns of the United States, and is represented in the leading industrial and commercial centers of foreign lands.

## A Large Refrigerating Machine.

Owners of refrigerating plants or those who may contemplate operating equipment of that character will doubtless be interested in the accompanying illustra-

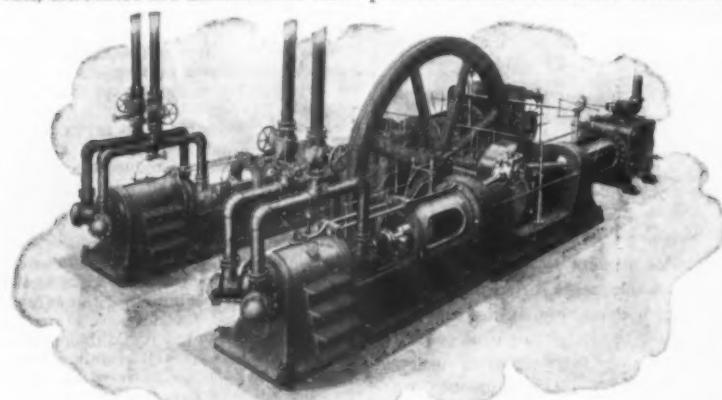


CARBORUNDUM PRODUCTS.

gation of methods in manufacturing emery resulted in adopting the vitrified process and the introduction of improvements, the greatest being the application of hydraulic pressure in forming the wheel prior to vitrification. This produces a wheel of the highest possible solidity and strength. While carborundum is first of all adapted for an abrasive because of its extreme hardness, yet it has refractory and chemical properties which have greatly extended its use in the arts, especially the manufacture of steel. In industrial circles it is well known that the Carborundum Co. of Niagara Falls, N. Y., (manufacturing under the Acheson patents) introduced and manufactures carbo-

tion of a large refrigerating machine recently installed.

The machine comprises a cross-compound Corliss engine, the high-pressure cylinder being 28-inch bore and 40-inch stroke, and the low-pressure cylinder 48-inch bore and 40-inch stroke. The frames are of the heavy-duty type and cranks of the disc pattern; each side of the engine connected to an ammonia compressor, both of which are double-acting and of 20-inch bore and 40-inch stroke. The daily capacity in refrigeration is equal to the melting of 320 tons of ice in twenty-four hours. It will be noticed that the machine is very compact throughout. It was erected for the Theo. Hamm Brew-



A LARGE REFRIGERATING MACHINE.

rundum goods of various kinds, in perfecting which it has invented and made use of many new and valuable methods of manufacture. The company's carborundum products include materials for the requirements of the grinder and polisher of metal, rubber, marble, ruby, granite, sapphire, terra-cotta, glass, porcelain, pearl, wood, leather, rawhide, paper, etc. Its manufactures embrace crude carborundum crystals, grains and powders, carborundum wheels, carborundum sticks, knife-sharpeners, hones and bricks, carborundum paper and cloth, carborundum dental goods. All the processes are carried through from the raw materials to

ing Co., St. Paul, Minn., less than a year ago. Similar machines are in operation with the G. H. Hammond Company, packers, Chicago, Ill., and the Pittsburgh Brewing Co., Pittsburgh, Pa. The Vilter Manufacturing Co. of Milwaukee, Wis., built the machine briefly described. It also builds standard double-acting ammonia compressors driven by high-pressure, compound and compound condensing Corliss engine, as also single-acting ammonia compressors driven by slide-valve engines on the same bed-frame.

Either of these styles are furnished also for driving by electric motor, gas or gasoline engine or from lineshaft. These ma-

chines are built in capacities of from one and one-half tons refrigeration or three-quarters ton ice-making capacity up.

The Vilter plant for building ice-making and refrigerating machines covers about five acres of ground at Milwaukee.

## Jeffrey Barrel-Handling Machinery.

Labor-saving devices for handling raw materials and finished products are designed and built for any and every industry. Manufacturers who have to handle filled barrels will be interested in the ac-

veyor with too much of a jar. The platform conveyor consists of two strands of roller chain, covered completely with hardwood slats, forming an endless belt or apron. The two conveyors described being of the roller type will travel on a track with a minimum friction, wear and consumption of power. From the platform conveyor the barrels are rolled onto the trays of the combined elevator and conveyor, which carries them down to any one of the several floors on the descending side. The special features of this com-



FIG. 1—JEFFREY BARREL-HANDLING MACHINERY.

panying illustrations of a system of elevating and conveying equipment for handling filled sugar barrels in the plant of the Canadian Sugar Refinery Co. at Montreal.

The system consists of one incline elevator and conveyor, one combined elevator and conveyor and one horizontal platform conveyor, which three are shown in part by Figure No. 1. The barrels are elevated up from the outside by means of a specially-constructed elevator consisting of two strands of roller chain with saddles or arms at intervals. The first por-

tion of this elevator and conveyor are the swinging finger trays or saddles and the loading and unloading devices. The barrels are rolled from the platform conveyor onto loading fingers; the swinging trays, coming up between the loading fingers, lift off the barrels, carry them upward across the room and down on the other side, depositing them on discharging fingers located at different floors, from where they roll off on the floor. The loading and unloading is done automatically. The loading fingers are made to fold back out of the way in case it is desired to pass them without



FIG. 2—JEFFREY BARREL-HANDLING MACHINERY.

tion of this elevator is on an incline of about 60 degrees, and the second portion practically level. The barrels are picked up automatically from skids and discharged over the head wheels onto the horizontal platform conveyor shown in Figure No. 1. As the barrels are discharged over the head wheels of the incline conveyor they are guided onto the platform conveyor by means of a swinging guide or check suspended from the ceiling, which also prevents the barrels from traveling at more than a certain speed and from striking the platform con-

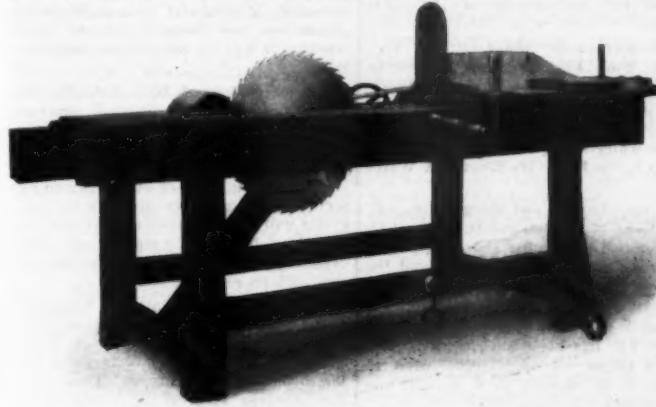
veyor with too much of a jar. The platform conveyor consists of two strands of roller chain, covered completely with hardwood slats, forming an endless belt or apron. The two conveyors described being of the roller type will travel on a track with a minimum friction, wear and consumption of power. From the platform conveyor the barrels are rolled onto the trays of the combined elevator and conveyor, which carries them down to any one of the several floors on the descending side. The special features of this com-

panying illustrations of a system of elevating and conveying equipment for handling filled sugar barrels in the plant of the Canadian Sugar Refinery Co. at Montreal.

makes a specialty of designing and installing this character of work. Main plant and office at Columbus, Ohio.

#### Gibbes Portable Shingle Machine.

Manufacturers of shingles are asked to direct their attention to the accompanying illustration of an improved self-feed shingle machine. The machine is shown with a 20-inch shingle saw and the shingle carriage. The mandrel and bearings are extra heavy, the feed belt is leather, and all materials used are the best obtainable for the purpose. The carriages



GIBBES SELF-FEED PORTABLE SHINGLE MACHINE.

are extra strong and heavy, being made of selected hardwood. Track iron is planed and accurately fitted.

Size of driving pulley 8x8½ inches, and should make about 1600 revolutions per minute. Machine requires four to six horse-power. Capacity, 1000 to 1200 shingles per hour.

On the pulley side of machine is a bolting attachment, consisting of 36-inch bolting saw and bolting carriage, as usually used for ripping stock into suitable dimensions for sawing into shingles, for, though a saw-mill may be used for bolt-

#### A Record in Coal Hoisting.

The steadily-increasing bulk in which coal is conveyed by sea and rail and stored for boiler service in high pockets at power stations and plants has led to a demand for increased speed in the necessary hoisting and handling machinery.

Demurrage on steamships and cars is an item to be carefully avoided in economical management, and the large coal cargoes now shipped to terminals can only be handled with success by specially-designed high-speed machinery. The problem is different from and more difficult

Run-of-mine bituminous coal was raised ninety feet above the tidewater from one hatch of a vessel and delivered to the storage pockets, cracked to mechanical stoking size, at the rate of 320 tons per hour by one tower. This is an advance of about 200 per cent, upon the previous best, and marks an important mechanical engineering achievement.

To attain this end the steam engines of 50 to 100 combined horse-power in common use have been replaced by machinery of 300 horse-power, and the coal-cracking machine attached to the tower cracks to the proper dimensions for automatic stokers before passing to the pockets the enormous quantity of coal, over five tons per minute, delivered to it from the hoisting machinery. The ordinary small steam shovel has been supplanted by an automatic one of two tons capacity at each lift.

The time occupied in raising two tons of coal from the hold of a vessel to the discharging hopper nearly 100 feet above is only six seconds, while the round trip, involving the operations of lowering and moving the shovel out on the boom, opening the former, digging up two tons of coal, raising it to the level of the hopper and discharging it therein, is frequently performed in twenty-two seconds.

The installation shown in the illustration follows in general design, but in heavier proportion, the standard Hunt steeple-tower rig, the moving gear and coal cracker being electrically driven and the hoisting engine direct connected. The towers have to traverse overhead the whole length of the coal-storage pocket and to move thirty feet at a time without changing steam connection. In this way a single tower can operate on each hatch of a vessel in turn, or several towers can work simultaneously.

The boom, made to fold up for the free manipulation of vessels with their rigging, has an overhang of forty feet, and enables the tower to operate on coal

substantial revolving frame, both driven by the same belt, and are so arranged that when one works the other remains at rest. Each saw can be adjusted to cut to its limit, or so that grooves of any depth can be made.

Expansion grooving heads can be furnished, cutting grooves to two inches wide, while the 14-inch saws used will cut off or rip quickly and accurately material up to four inches thick.

The table can be angled to 45 degrees,



IMPROVED DOUBLE CIRCULAR SAW.

and is in two sections, one being stationary for ripping and the other for cross-cutting, this last being nineteen inches wide, and moves out on rollers to admit grooving heads of different sizes to be inserted in the opening. The angle of the table is made by a curved slotted bar, with scale showing degree of incline, and quadrants on table regulate the right and left angles. All the different adjustments are made rapidly and easily, saving time, attention and labor.

J. A. Fay & Egan Co., 270 West Front street, Cincinnati, Ohio, builds this machine.

#### Cannery for Huntsville.

Mr. Ben P. Hunt, secretary of the Chamber of Commerce of Huntsville, Ala., writes to the Manufacturers' Record that

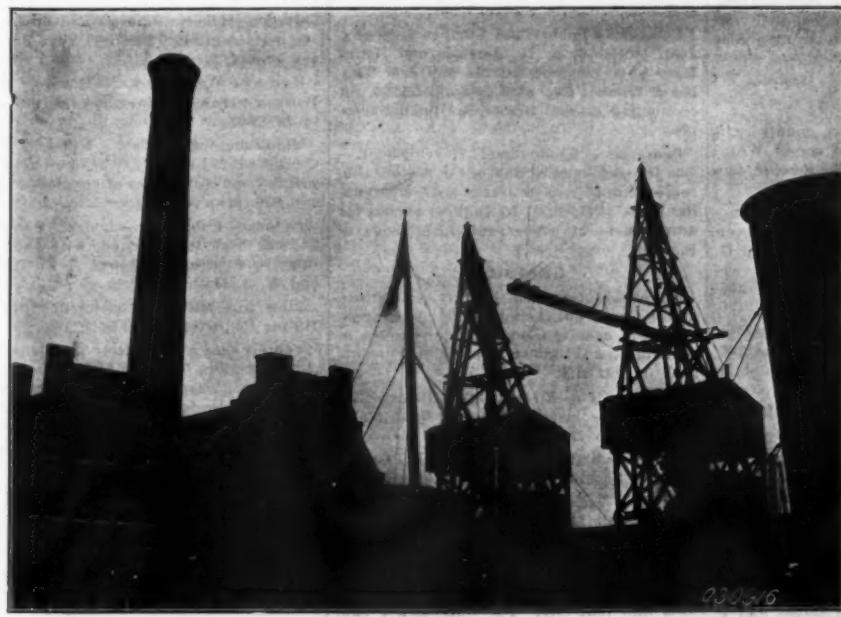


FIG. 1—THE RECORD-BREAKING COAL UNLOADER AT THE LINCOLN WHARF POWER STATION, BOSTON, MASS.



FIG. 2—THE C. W. HUNT CO.'S COAL UNLOADER AT BOSTON.

ing, the arrangement mentioned is more convenient and makes practically a complete shingle outfit combined in one machine. All else required is a cross-cut saw or a drag-saw machine to saw logs into proper lengths, and with the bolting saw the stock is ripped and then cut into shingles with the smaller saw and carriage.

For further particulars address Messrs. W. H. Gibbes & Co., Columbia, S. C., manufacturers and dealers in saw and shingle mill machinery and mill machinery generally.

to the machinery incidental to the service, and it changes constantly with the nature and size of the coal, which may vary from a soft pea variety contained in open wooden barges to a hard foreign product in cubes two feet square loaded in steel vessels with small hatches. A great advance in the speed of handling coal from freight vessels and barges calls to be recorded, a world's record for rapid unloading having been recently established by the C. W. Hunt Co., West New Brighton, N. Y., at the Lincoln Wharf Power Station of the Boston Elevated Railway Co.

steamers of the widest beam and largest dimensions.

#### Improved Double Circular Saw.

Herewith is illustrated a machine for doing work in furniture, pattern, sash and carriage factories, and it can be used for such work as ripping and cross-cutting in a manner almost unlimited. The machine embodies features and improvements that insure perfect execution of the work for which it has been especially designed. Two saws, one to rip and the other to cross-cut, are used, being mounted in a

there is a good prospect for the establishment of a cannery factory at Huntsville, and that a practical man of some means experienced in canning fruits and vegetables will get substantial aid in the way of subscriptions to stock to the amount of several hundred dollars. He adds that the country around Huntsville is splendid for fruits and vegetables, and that correspondence is solicited.

The Creole Line has started a steamship service between Savannah and ports of France, Spain and Italy.

# CONSTRUCTION DEPARTMENT.

## TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

### EXPLANATORY.

The Manufacturers' Record seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

### ADDRESS FULLY.

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

### WRITE DIRECTLY.

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

### ALABAMA.

Anniston—Spike Mill and Cooperage Plant. Weller Rolling Mill Co. will add \$15,000 spike mill and cooperage plant to its mill; W. T. Owen, secretary.

Anniston—Drug Company—Live & Love Drug Co. has been incorporated to succeed the Love Drug Co. Capital is \$9000 and officers are O. A. Love, president-general manager; W. H. Doster, secretary, and J. F. Yates, treasurer.

Baldwin County—Land Improvement—Southern Plantation Development Co., general offices Suite 1024, 79 Dearborn street, Chicago, Ill., has purchased a tract of 80,000 acres of land in Baldwin county, besides the good-will of a company which has already colonized 12,000 acres adjoining. Company will commence its plant for manufacture of wood turpentine and other by-products within the next three months at a cost of \$100,000, handling from 75 to 100 cords of wood per day; company will also put in canning factories, starch factories, sugar-cane and syrup mills, etc.

Birmingham—Paint Company.—Salva Paint Co. has been incorporated, with capital of \$10,000, by Grey J. Huffman, Joseph F. Johnston and C. S. Huffman, for the manufacture of paint.

Birmingham—Mercantile.—Chartered: A. E. Campbell Co., with capital of \$3000, by A. E. Campbell and A. J. Camp.

Birmingham—Manganese Mines.—John L. Ray of Albertville, Ala., has option on manganese properties near Grayton Station, and contemplates organization of stock company for developing the property.\*

Birmingham—Land Improvement.—Rugby Land & Improvement Co. has acquired controlling interest in the East Lake Land Co., and the two concerns will be managed together. Improvements already under way on the East Lake property will be pushed to completion and further work undertaken. Bradley J. Saunders, vice-president and general manager of the Rugby Company, has

been elected vice-president and general manager of the East Lake Land Co.

Fruitdale—Cannery.—It is reported that J. B. Abrams of Brunswick, Ga., is interested in the establishment of a cannery at Fruitdale with capacity of 10,000 cans per day.

Gadsden—Flour Mill.—Cassels Bros., manufacturers of flour, will erect new mill; building will be four stories, of brick, 50x100 feet.

Hartselle—Water-works.—System of water-works may be constructed. Address The Mayor.

Hartselle—Electric-light Plant.—Shipp & Tapscott Manufacturing Co. will install electric plant for lighting stave mill and for supplying lights to the city.

Huntsville—Sewerage.—City has awarded contract to Hutchens & Murdock at \$7390 for extension of sewerage system.

Jasper—Coal Mines.—The Lancaster Coal & Coke Co. of Pennsylvania has purchased the Palos coal mines near Jasper, in Walker county, from D. M. Wrennen and others of Birmingham; property consists of 2000 acres, on which there is a coal mine producing 400 tons a day.

Mobile—Dredging.—Home Dredging Co. has been incorporated, with capital of \$25,000, by Lee E. Kimball, Chas. G. Ollinger and Harry W. Ollinger.

Mobile—Auction, etc., Company.—Mobile Auction & Commission Co. has been incorporated, with capital of \$5000, by A. A. Richards, M. C. Forchheimer and T. G. Bush.

Seima—Portland Cement Works.—Charles Aaron Sawyer of Boston, Mass.; B. F. A. Taylor and others are interested in the organization of a \$3,000,000 company to be chartered under Georgia laws and with headquarters at Atlanta, Ga., for development of cement rock in Dallas county and for the establishment of a plant to manufacture Portland cement with capacity of 5000 barrels a day.

Thorsby—Planing Mill and Woodworking Factory.—Thorsby Lumber & Manufacturing Co. (established) will be incorporated with capital stock of \$500,000.

Walker County—Coal Mines.—It is reported that the Pittsburg Coal Co. of Pittsburgh, Pa., has acquired the Monongahela Coal Co., which last year acquired the Corona Coal & Coke Co., the leading coal property in Walker county.

### ARKANSAS.

Bentonville—Bridge.—Benton county will construct \$12,000 steel bridge across White river. Judge E. L. Taylor, Bentonville, has let contract for building same.

Godman—Coal Mines and Coke Ovens.—Black Diamond Coal & Coke Co. has been incorporated, with capital of \$25,000, and G. H. White, president; H. J. Fowler, vice-president, and W. A. Butterfield, secretary-treasurer.

Helena—Publishing.—World Publishing Co. has been incorporated, with capital of \$12,500, by Oscar D. Driggs, Jesse H. Geduldig, Chas. N. Underwood and William M. Neal.

Little Rock—Stone and Construction Company.—Big Rock Stone & Construction Co. has been incorporated, with capital stock of \$100,000, and W. W. Dickinson, president; J. J. Ball, vice-president, and C. E. Taylor, secretary-treasurer.

Little Rock—Sewer Construction.—Contract has been awarded Nick Peay for construction of 400 feet of sewer.

Rison—Mercantile.—Chartered: E. W. Emerson Co., with capital of \$10,000, and T. H. Ackerman, president.

### FLORIDA.

Bowling Green—Turpentine Plant.—J. L. Conoley and M. M. Smith have purchased and will operate turpentine plant at Bowling Green of Alford Bros.

De Land—Telephone System.—E. L. Potter has been granted franchise for construction of telephone system.

Duval—Timber and Turpentine Lands.—W. J. Hillman & Co. of Jacksonville, Fla., have purchased the business of D. C. Stricklin & Co. at Duval and 140,000 acres of timber lands, together with four turpentine locations, from the Naval Stores Manufacturing Co. of Jacksonville.

Eagle Lake—Turpentine Properties.—Calahan, Fort & Boyd have purchased turpentine interests at Eagle Lake of Feagin & Norman.

Electra—Turpentine Plant.—J. H. Martin has purchased turpentine business of Middleton & Co. at Clarksville, and will operate in connection with his naval-stores business at Electra.

Fort White—Phosphate Mines.—Samuel W. Ferguson, Charleston, S. C.; Augustin L. Taveau, Baltimore, Md., and Arthur J. Henry, Lake City, Fla., have incorporated the Fort White Hard Rock Co., with capital of \$15,000, for development of phosphate mines, etc.

Juliette—Turpentine Plant.—R. L. Ivey of Ocala, Fla., has purchased turpentine plant and property of S. M. Davis at Juliette.

Lake City—Electric-light Plant and Water-works.—City council has granted electric-light and water-works franchises and other privileges to the Lake City Electric & Water Co.

Lumberton—Lumber and Shingle Mills, etc.—Neil G. Wade, W. E. Bell and D. B. Morrison have purchased the lumber and shingle mills of James R. Ingram at Lumberton and the turpentine lands of J. T. Wade & Co. at Millard.

Manatee—Fertilizer Factory.—Manatee Fertilizer Co. has been incorporated, with capital of \$25,000, for manufacture of fertilizers, by T. W. Shands, F. R. Knight and W. B. Corsey.

Miami—Ice Factory.—East Coast Ice Co. will make improvements, including addition of cold-storage room with capacity of 500 tons.

Miami—Stone Quarry.—Offer-Cronkite Quarry Co. is installing additional machinery for increasing capacity of its stone quarry.

Ocala—Ice Factory and Woodworking Plant.—Florida Meat Packing Co. will consolidate with the Florida Ice Manufacturing Co. and operate as the Florida Packing & Ice Co., with Simon Benjamin of Jacksonville, Fla., president. New machinery for enlarging ice plant will be installed and company has also completed arrangements for the establishment of saw-mill and crate factory in connection with ice plant.

Orlando—Repair Shop.—J. N. Cook and J. T. Barnett are erecting building and will install machinery for general repair shop.

Pensacola—Timber and Lumber Company.—John McDavid, A. D. Morrison and Henry Hyer have incorporated the McDavid Timber & Lumber Co., with capital of \$2000, for conducting general timber and lumber business.

Pensacola—Timber-land Development.—The Indiana Land & Harbor Co. has been incorporated under New Jersey laws, with capital stock of \$5,000,000, by Indiana parties for development of timber and farm lands in Florida.

### GEORGIA.

Atlanta—Motor-coach Factory.—American Motor Coach Co., Arthur G. Bennett, president, will operate a line of motor coaches in Atlanta and establish factory and repair shop in that city.

Buena Vista—Electric-light Plant.—City contemplates installing electric-light plant. Address Geo. R. Lowe, recorder.

Buford—Water-power-Electric Plant.—Winding Shoals Electric Power Co. reported incorporated, etc., last week with \$500,000 capital, will at first install equipment for generating and transmitting about 3000 horse-power, to be increased later to 6000 horse-power. A substation will be built at Atlanta to reduce the electric current for transmission into that city. The water-power dam will be of the crib type, requiring more than 1,000,000 feet dry rubble and sawed lumber. About 6,000,000 feet of lumber will be used in all the work. The Electrical Equipment Co., J. W. Peterson, president, 939 Monadnock Building, Chicago, is preparing plans and specifications for dam, power-house and all the machinery needed, and will soon be ready to receive bids. Mr. Peterson made the surveys, and will be engineer in charge of construction. As previously stated, D. B. Stanchfield of Atlanta, Ga., is the Winding Shoals corporation's secretary.

Dahlonega—Gold Mines.—McAfee-Lind Gold Mining Co. has been organized for developing the Rutherford property recently purchased. W. W. McAfee of Atlanta, Ga., is president; Henry Schandine, Philadelphia, Pa., vice-president; M. P. Lind, Philadelphia, Pa., secretary-treasurer, and W. H. McAfee of Atlanta, general manager.

Dupont—Saw-mills, etc.—W. W. Gill &

Sons have purchased timber lands near DuPont, and will develop by erection of saw-mill and naval-stores plant.

Naylor—Cotton Gin.—J. L. Roberson will rebuild cotton gin lately reported burned. Building will be 30x75 feet.\*

Quitman—Cotton Mill.—Atlantic and Gulf Mills, reported last week to double plant, will erect buildings to accommodate the new machinery. Over 5000 spindles will be installed. Preliminary plans have been prepared, but the company has not decided whether it will let contract or build by day labor.

Rockmart—Cement Mill.—Southern States Portland Cement Co., John W. Boardman, treasurer, 1107 Empire Building, Atlanta, Ga., will soon have its cement mill at Rockmart (previously reported) completed and in operation; total cost of buildings and equipment will be approximately \$350,000, and capacity will be 1600 barrels of portland cement per day; later on company will operate crushing plant and slate quarry in connection with its cement business.

Savannah—Tanks.—National Tank & Export Co. is negotiating for erection of tank; contract not yet awarded; present capacity 15,000 barrels; amount to be invested in new improvement about \$100,000. Company also contemplates erection of tanks at other naval-stores points.

Tifton—Iron Works, etc.—George T. Gifford, G. W. Gifford and John A. Ritchie have incorporated the George T. Gifford Iron Works Co., with capital of \$6000, for conducting general iron works, foundry and machine shop business.

Tifton—Mercantile.—Chartered: Gress Manufacturing Co., with capital of \$25,000, by M. V. Gress and others for conducting general mercantile business.

### KENTUCKY.

Franklin—Road Improvement.—Simpson county has appropriated \$10,000 for road improvements. Address county clerk.

Gondola (not a postoffice)—Oil and Gas Wells.—Chip Oil & Gas Co. has been incorporated, with capital of \$20,000, by D. Y. Hagy and others.

Gordon—Bakery.—Chartered: Gordon Bakery, with capital of \$5000, by C. T. Dixmore and others.

Hazard—Water-works.—Hazard Water-works Co. has been incorporated, with capital of \$5000.

Middlesborough—Coal Mines.—Yellow Creek Coal & Lumber Co. has purchased and will develop 20,000 acres of coal lands in several Kentucky counties.

Paducah—Publishing—Lester Publishing Co. has been incorporated, with capital of \$5000, by Sterling W. Banks, R. D. Wilbank and W. A. Hall.

Pine Top—Milling.—Chartered: Pine Top Milling Co., with capital of \$11,000.

Venters (not a postoffice)—Telephone Company.—Venters Telephone Co. has been organized, with capital of \$7000, to connect Elkhorn City, Praise and other towns. G. F. Holbrook is chief incorporator.

Whitesburg—Mineral-land Development.—The Mineral Development Co., Philadelphia, Pa., is having mineral property in Letcher county surveyed. L. W. Fields of Whitesburg, Ky., has contract to superintend the work.

Whitesburg—Saw-mill.—Crawford & Collins of Rockhouse, Ky., will erect saw and planing mill near Whitesburg for development of timber lands.

Winchester—Bakery.—C. P. & B. A. Mann have purchased and will operate the Brown Bakery.

### LOUISIANA.

Abbeville—Machine Shops, etc.—J. F. Ritter of Jennings will, as lately reported, establish machine and general repair shop, with rice irrigation well business in connection, at Abbeville; also expects to handle engines, boilers, pumps, mill supplies, etc.

Ball—Lumber Mill.—J. F. Ball & Bro. have purchased 1500 acres of timber land, and will enlarge their mill for developing the property.

Franklin—Candy Factory.—A. S. Achee will establish candy factory.

Franklin—Lumber Mills.—Company has been organized for taking over and operating the mills of the Albert Hanson Lumber Co.; plant has capacity of 75,000 feet of lumber

per day, and includes planing mills, sash, door and blind factory.

Helena—Terminals.—A tract of seventy-five acres of land has been purchased at Helena to be used for terminal purposes by the Memphis, Helena & Louisiana, the Texas & Pacific and the New Orleans & Northwestern railroads. Roundhouses, terminals, shops, freight terminals and other improvements will be made. Address W. J. Tyler, general superintendent of the New Orleans & Northwestern, St. Louis, Mo.

Lake Charles—Street Paving.—Baer & Pringle of Kansas City, Mo., have contract at \$57,223 for paving Ryan street with vitrified brick in Lake Charles.

Morgan City—Lumber Mills.—Morgan City Cypress Lumber Co. has been organized by John F. Herbert, S. C. Teves, William Drews, Jr., and others.

New Orleans—Sewerage.—Contract will probably be awarded Cusachs & Co. at \$26,000 for construction of sewers.

New Orleans—Can Factory.—Southern Can Co., Limited, previously reported as incorporated to establish can factory of 60,000 cans per day capacity, has completed its organization with capital of \$50,000, electing Fred. D. Becker, secretary. Work on erection of plant will be commenced at once. Address 305 Hennen Building.\*

Welsh—Machine Shops.—Welsh Machine & Well Works Co., whose plant was recently burned at loss of \$15,000, will rebuild at once.

Whitecastle—Saw-mill.—H. L. Baker, president of the Baker-Wakefield Cypress Co., is making arrangements for establishment of his proposed saw-mill on Bayou Lafourche.

#### MARYLAND.

Baltimore—Chemical Works.—Chesapeake Chemical Co. has been incorporated, with authorized capital of \$12,500, by James Lester Shipley, Jr., George Shipley and G. Lane Taneyhill, Jr., to manufacture trade wastes into various commodities.

Baltimore—Laundry.—Baltimore Sanitary Laundry Co. has been incorporated under New Jersey laws, with capital of \$30,000, by Wm. A. Mulcahy and Henry Y. Bready, for conducting general laundry business in Baltimore. For further particulars address Wm. A. Mulcahy, 227 Carroll street, Woodberry, Baltimore, Md.\*

Baltimore—Real Estate.—Star Real Estate Co. has been incorporated, with capital of \$2000, by Felix Slusky, Morris Koppleman and others.

Baltimore—Wagon Factory.—John N. Kunkel & Son will erect three-story brick addition 60x60 feet to wagon factory. John Koch has contract at \$3500.

Cockeysville—Bridge.—Bridge will be constructed on public road over Northern Central Railway at Jessup's Crossing, near Cockeysville, by the county and railroad company jointly.

Frostburg—Power-house.—John W. George of Cumberland, Md., has contract to build power-house for Frostburg Illuminating & Manufacturing Co.; building will cost \$6500.

Roland Park—Road Improvement.—County commissioners have appropriated \$3000 for improving Roland avenue.

#### MISSISSIPPI.

Aberdeen—Button Factory.—Aberdeen Button Manufacturing Co. has been incorporated, with capital of \$10,000, by John R. Young, W. W. McDougal, W. W. Watkins, W. S. Greene and others, for manufacture of bone, pearl, ivory and metal buttons.

Collins—Saw and Planing Mills.—W. C. Wood Lumber Co., reported recently as to have its proposed saw and planing mills in operation about March 1 with capacity of 50,000 feet per day, has been incorporated, with capital of \$100,000, by W. C. Wood, W. B. Allen, E. N. Wood, E. E. Robertson and W. McAlexander.

Corinth—Clothing Factory.—Weaver Manufacturing Co., reported incorporated last week with \$50,000 capital, will manufacture trousers and skirts, not cloth. A suitable building is now being erected.

Greenville—Street Paving.—City has awarded contract to Southern Paving Co. at \$90,000 for paving streets.

Meridian—Hardware Company.—Frank Smith Hardware Co. has been incorporated, with capital of \$25,000, by F. E. Smith, J. C. Fritchett and others.

Mississippi—Saw-mill.—F. J. Blackwell Lumber Co. will remove one saw-mill from Jones, Tenn., to a point in Mississippi for development of timber tract which has been purchased.

Vicksburg—Crematory.—City has accepted plans and specifications of Stanton & Son,

architects, for proposed garbage crematory.

Williamsburg—Electric-light Plant and Water-works.—City will issue \$10,000 of bonds for erection of electric-light plant and construction of water-works. The issue of these bonds was reported recently as contemplated for purchase of the local plant; J. F. Williamson, mayor.

#### MISSOURI.

Carrollton—Wagon Works.—Beggs Wagon Co. is having plans made for erection of wagon works with capacity of 65,000 wagons per year.

Edina—Wagon Works.—Miller Wagon Co. will erect new plant, consisting of main building 80x250 feet and several storage warehouses; capacity will be from 1000 to 1500 farm wagons and 500 buggies per year.

Hazel—Cotton Mill.—Hazelhurst Cotton Mill Co., reported incorporated last week, is the incorporation of the established Hazelhurst Cotton Mills, operating about 1000 spindles. This capacity is now being doubled.

Jefferson City—Bridge.—City council has instructed street commissioner to build abutments for an iron bridge on Walnut street; abutments to cost \$1200, and soon as they are finished city will receive bids on the superstructure. Address J. C. Herring, city engineer.\*

Kansas City—Cracker, etc., Factory.—Loose-Wiles Cracker & Candy Co. will erect six-story brick addition to its factory at cost of \$20,000.

Poplar Bluff—Handle Factory.—Walsh & Hollingshead of Vincennes, Ind., are investigating with view to establishing ash-handle factory at Poplar Bluff.

Sedalia—Zinc Mine.—Company has been organized, with capital stock of \$500,000, for developing the Dan Grow zinc mine; improvements will be made. Dan Grow is president of the new company; Roy J. Howe, vice-president; Walter Grow, treasurer, and D. J. Delong of Chicago, Ill., secretary.

St. Louis—Investment Company.—Chartered: Blair Investment Co., with capital of \$10,000, by Richard B. Waite, William A. Albright, G. E. Strodtman and others.

St. Louis—Flour Mills.—Chartered: Kehler Flour Mills Co., with capital stock of \$500,000, by George F. Tower, Jr., W. C. Ellis and others.

St. Louis—Housefurnishing.—Chartered: Eastern Housefurnishing Co., with capital of \$25,000, by Chas. A. Wilcox, Chas. A. Smith and others.

St. Louis—Furniture Factory.—Brookes Manufacturing Co. has been incorporated for manufacture of furniture by W. S. Brookes, William S. Hervey, F. V. Hervey and others; capital \$2500.

St. Louis—Mercantile.—Chartered: Becker Grocery Co., with capital of \$10,000, by Edwin F. Wippern, Geo. O. Althage and others.

St. Louis—Lumber Company.—H. Wachsmuth Lumber Co. has been incorporated, with capital of \$6000, for conducting lumber business, by H. Wachsmuth, M. Morris, E. Wachsmuth and others.

St. Louis—Building Material.—Lawrence Stone & Construction Co. has been incorporated, as recently reported, for manufacture of hollow concrete building stone with capacity of from twelve to fifteen cars per week; also to conduct general construction business. Building will be 50x100 feet, and capital to be invested \$10,000. Address 3431 Cherokee street.\*

St. Louis—Shirt and Underwear Factory.—Buckley Shirt & Underwear Co. has been incorporated, with capital of \$25,000, by Michael J. Morlock, J. Henry Biermann, Fremont T. Fischer, Henry G. Schuarr and others.

St. Louis—Chemical Company.—E. B. Berry Chemical Co. has been incorporated, with capital of \$100,000, by Ella R. Berry, Alfred K. Prince, Messie M. Rich and others for dealing in and manufacturing chemicals, drugs, etc.

St. Louis—Shoe Company.—Flegle Shoe Co. has been incorporated, with capital of \$60,000, by Walter Jones, James Clark, Robert Dunn and others.

St. Louis—Tool Company.—Davis Expansion Boring Tool Co. has been incorporated, with capital of \$20,000, by Emery M. Davis, Alexander Landan and others for the manufacture of tools, machinery and other devices.

#### NORTH CAROLINA.

Carthage—Investment Company.—Chartered: Carthage Investment Co., with capital of \$10,000, by W. C. Petty and others.

Charlotte—Drug Company.—Gray-Reese Drug Co. has reorganized with Robert Gray, president.

Concord—Lumber and Mining Company.—Carrboro Land, Lumber & Mining Co. has been incorporated, with capital of \$15,000, by J. L. Peck, W. A. Smith and others.

Greenville—Livery.—Vanstory Livery Co. has been incorporated, with capital of \$15,000,

by George C. G. Graves of Carthage, N. C., and others.

Greenville—Tobacco Company.—Farmers' Consolidated Tobacco Co. has been incorporated, with capital of \$125,000, by O. L. Joyner and others for manufacture of cigars, tobacco and cigarettes.

Greenville—Lumber and Veneer Mills.—Greenville Lumber & Veneer Co. has been incorporated, with authorized capital of \$25,000, for manufacture of lumber and veneering, by A. B. Minor of Suffolk, Va.; H. McClellan, Greenville, N. C.; O. G. Calhoun, Sheldrake, N. C., and others.

Hazel—Cotton Mill.—Hazelhurst Cotton Mill Co., reported incorporated last week, is the incorporation of the established Hazelhurst Cotton Mills, operating about 1000 spindles. This capacity is now being doubled.

Henderson—Telephone and Telegraph Company.—Home Telegraph & Telephone Co. has been incorporated, with capital stock of \$500,000, by W. T. Gentry, D. L. Carson, J. W. Cross, J. P. Taylor and others.

Hickory—Street Improvement and Water-works.—City has voted issue of \$60,000 of bonds for water-works and \$10,000 of bonds for street improvements, previously reported. Address The Mayor.

High Point—Mantel and Table Company.—High Point Mantel & Table Co. and the Grand Rapids Furniture Co. have consolidated, and will operate as the Kearns Furniture Co., with capital of \$77,000 and O. E. Kearns, secretary-treasurer.

Durham—Mercantile.—Chartered: S. C. Anderson Co., with capital of \$25,000, for dealing in books, etc., by S. C. Anderson, L. W. Grissom and Wm. B. Guthrie.

Greensboro—Mercantile.—Williams-Nall Company has been incorporated, with capital of \$50,000, by O. Williams of Greensboro, E. D. Nall of Sanford, N. C., and others.

Lilledoun—Cotton Mill.—Moore Cotton Mill contemplates installing additional machinery and a dyeing plant; present equipment 200 spindles and ninety-six looms.

Marshall—Cotton Mill and Power Plant.—Capitol Manufacturing Co., reported incorporated last week, will develop about 2000 horse-power from water flow and build a cotton mill of 15,000 spindles and 450 looms. Mill structure will be 100x200 feet in size. No contracts have been awarded. W. J. McLendon of Wadesboro, N. C., is president and general manager.

Ramscur—Cotton Mill.—Columbia Manufacturing Co. will erect additional building two stories high, 50x88 feet, and install additional machinery.

Reidsville—Telephone System.—Southern Bell Telephone & Telegraph Co. has purchased, will improve and operate entire plant of Reidsville Telephone & Telegraph Co.

Smithfield—Cotton Manufacturing, etc.—Incorporated: Holt Cotton Co., to manufacture and deal in cotton, etc.; capital stock to be \$100,000; Stephen S. Holt, Willis H. Austin and Allen K. Smith, incorporators.

Smokemont—Saw-mill.—Spruce Lumber Co., reported lately under Asheville, N. C., as incorporated with capital of \$15,000, has 6000 acres of timber land which it will develop, and has purchased mill of 25,000 feet of lumber daily capacity, which will be erected at Smokemont. Address S. Montgomery Smith, general manager.

Waxhaw—Gold Mine.—The Collossus Gold Mining & Milling Co. of Philadelphia, Pa., operating near Waxhaw, N. C., with capacity of 10 tons per day, is preparing to erect at an early date a 500-ton plant for treatment of gold, and will use its present 100-ton plant to work up the present tailing deposits.

#### SOUTH CAROLINA.

Aiken—Sewerage and Water-works.—City has voted issue of \$30,000 of bonds for water-works and sewerage. Address The Mayor.

Bishopville—Water-works.—Construction of system of water-works is talked of. Address J. C. Rhaim, clerk.

Charleston—Land Improvement.—J. H. Dawes of the American Pipe Co. of Philadelphia, Pa., has purchased 100 acres of land near Charleston and will build suburban town to be called Chicora Place. Dwellings will be erected, streets laid off and other improvements made.

Columbia—Laundry.—Star Steam Laundry, recently damaged by fire to extent of \$10,000, will be rebuilt.

Darlington—Publishing.—New Era Publishing Co. has been incorporated, with capital of \$3000, by E. C. Dennis and T. J. Drew.

Georgetown—Wood-alcohol Plant.—Seaboard Product Co. will rebuild its plant recently burned at loss of \$15,000; buildings

will be of sheet iron and brick, 100x40 and 28x40 feet; D. H. Greene, president.

Greenville—Poultry Farm.—B. M. Henderson will establish poultry farm and install incubators and other necessary equipment.

Newry P. O.—Cotton Gin.—Courtney Manufacturing Co. has built and will put in operation at once new three 30-saw cotton gin of the Munger system. This to replace gin washed away by flood in June last.

Sumter—Engineering Company.—Southern Engineering Co. has been organized and established, as recently reported. Capital stock is \$10,000, and business will be general engineering, making a specialty of contracting for complete oil mills, including the buildings; will also do general building, attending to both the architectural and mechanical work; Perry Moses, Jr., manager.\*

#### TENNESSEE.

Cave—Pants, etc., Factory.—Burroughs & Taylor Co., manufacturer of jeans, lindseys and pants, is erecting an additional story to its brick factory.

Chattanooga—Repair Shops.—Chattanooga Electric Railway will expend about \$30,000 in enlarging present repair shops or building new ones.

Chattanooga—Machine Shops.—E. W. Snowden, chief architect for the Queen & Crescent Route, with headquarters at Ludlow, Ky., will begin at once on plans and specifications for improvements and enlargements to be made at machine shops and other buildings of the railroad company at cost of \$100,000. Improvements include, in part, enlargement of power-house, laying of additional track, enlargement of main machine shop and all the minor buildings and installation of some new machinery, including 200-ton electric derrick. These improvements have been in contemplation for some months.

Chattanooga—Telephone System.—The Hamilton County Telephone Co., previously reported as incorporated with capital of \$10,000 and to apply for franchise for construction of telephone system, has been granted franchise by the city.

Dyersburg—Cotton Company.—John W. Knight, E. B. Hulsey, V. P. Randolph and others have incorporated the Tennessee Cotton Co., with capital stock of \$25,000.

Joppa—Swing Factory.—Boilinger Bros. will enlarge their lawn-swing factory.\*

Knoxville—Knitting Mill.—Knoxville Knitting Mills Co., reported last week, has increased capital to \$50,000 and will install 150 additional knitting machines with complementary apparatus.\*

Martell—Flour Mill.—Geo. W. Bolinger of Joppa, Tenn., has purchased the Martell flour mills, as lately reported, and will install new machinery for enlarging same; capacity will be about forty barrels; will operate as the Martell Mill Co.

Memphis—Medicine Factory.—Nitroline Manufacturing Co. has been incorporated, with capital of \$10,000, by J. H. Boone, A. Carnes, E. A. Boone, J. T. Forsyth and Howell Turner, for manufacture of medicines.

Memphis—Plantation Company.—Playa Vicente Plantation Co. has been incorporated, with capital of \$100,000, by John J. Jones, Clement H. Weyand and S. D. C. Hays.

Memphis—Land Improvement.—Strong Land Co. has been incorporated, with capital of \$7000, by A. R. Strong, W. A. Hein, M. Crump, Percy Galbreath and others.

Memphis—Heating System.—Memphis Heating Co., capitalized at \$300,000, has applied through its attorney, O. D. M. Greer, to city for 50-year franchise to operate system of underground pipes for heating all parts of the city.

Memphis—Lumber Mill.—Braughton & Co. will rebuild at once hardwood lumber mill reported burned at loss of \$6000.

Mt. Pleasant—Land Improvement.—Mt. Pleasant Real Estate & Land Improvement Co. will be organized to purchase and improve real estate by erection of dwellings, etc. For particulars address Dr. J. S. Hill.

Nashville—Game Company.—Washington Card Co. has been incorporated, with capital of \$20,000, by E. H. Roy, J. L. Wade, J. H. Roberts and others for the manufacture of parlor card game.

Pleasant View—Tobacco Factory.—York & Hunter have commenced erection of tobacco factory.

Somerville—Stock-raising. Correction.—Chas. D. Myer, F. H. Myer, H. T. Hagler, Albert A. Hagler, E. C. Boswell and M. C. Ketchum are the incorporators of the Oakdale Stock Farming Co., reported last week. Capital is \$40,000. Through an error in our issue of October 1 names of incorporators were not correctly given.

## TEXAS.

Austin—Gas Plant.—It is reported that W. H. Coldreick of the Beaumont (Texas) Gas Co. has applied for franchise to construct and operate \$50,000 gas plant at Austin.

Beaumont—Pumping Company.—Ninety-Nine Pumping Co. has been incorporated, with capital of \$5000, to prospect for oil, etc., by J. M. Smith, O. M. Darbyshire, Beaumont; J. D. Crawford, Marshall, Texas, and others.

Beaumont—Rice Mill.—McFaddin, Wiess & Kyle Land Co. has leased mill of the Atlantic Rice Mills Co., and will operate same as the McFaddin-Wiess Rice Milling Co. with W. H. McFaddin, president and general manager; V. Wiess, vice-president, and Percy H. Wiess, secretary-treasurer. Mr. McFaddin was reported recently as having secured controlling interest in the above mills.

Beaumont—Irrigation System.—Iowa Irrigation Co., Beaumont, Texas, will construct canal twelve miles in length to convey water from Sabine river to rice fields in Texas. About \$70,000 will be invested. W. A. Ward of Beaumont, Texas, is engineer in charge.

Beaumont—Fuel Company.—Darbyshire Fuel Co. has been incorporated, with capital of \$2000, by B. F. Darbyshire of El Paso, O. M. Darbyshire, J. M. Smith of Beaumont.

Brownwood—Telephone System.—Central Texas Telephone Co., N. H. Hollingsworth, president, Ballinger, Texas, has applied for franchise to establish telephone exchange in Brownwood.

Brownwood—Electric-light Plant.—City council is considering municipal ownership of electric-light system to be operated in connection with the city water-works, and Will H. Mayes of Business League has been requested to secure approximate cost of such a plant, and invite correspondence.

Calvert—Cannery.—H. L. Stricker and associates will organize company for erection of cannery, investing about \$6000.\*

Cleburne—Knitting Mill.—John Jennings of Hillsboro, Texas, proposes organizing company to establish knitting mill at Cleburne.

Cleburne—Grain Company.—Chartered: Cleburne Hay & Grain Co., with capital of \$10,000, by S. M. Hill, T. H. Teeter, J. Gould Hill and others.

Columbus—Canals, Rice Lands, etc.—Scott M. Ladd, C. S. Hunn, W. E. Hunn and N. A. Baker, all of Des Moines, Iowa, have purchased property of Red Bluff Rice Co., consisting of 4000 acres of land, canals, machinery improvements, etc., for \$120,000.

Dallas—Piano Company.—Chartered: Columbia Piano Co., with capital of \$1000, by W. T. Madders, A. T. Wilson and J. M. Swanson.

Denton—Oil Company.—Denton-Henrietta Oil Co. has been incorporated, with capital of \$100,000.

Fort Worth—Garment Factory.—Hawkins Manufacturing Co. of Hillsboro, Texas, manufacturer of overalls and jumpers, will remove plant to Fort Worth, as recently reported; capacity of plant will be enlarged.

Fort Worth—Mining.—Independent Mining Co. has been incorporated by John C. Phelan, W. T. Hall and Morgan Bryan.

Fort Worth—Telegraph Company.—Fort Worth Telegraph Co. has increased capital from \$30,000 to \$450,000.

Hillsboro—Cotton Gin.—Haley Gin Co. has been incorporated, with capital of \$6000, by E. M. Turner, W. M. Williams and E. B. Guttire.

Houston—Lumber Company.—South Texas Lumber Co. has increased capital from \$50,000 to \$100,000.

Lagrange—Kaolin Mines, etc.—F. B. King "Syndicate" has leased and will develop kaolin properties in Fayette county, as recently reported; hydraulic brick, tiling and pottery will be manufactured and other extensive improvements made. H. C. Cooke & Co. of Houston, Texas, will be architects; ceramic engineer will be engaged and machinery purchased. Address F. B. King, Houston, Texas, for further information.\*

Nacogdoches—Tobacco Cultivation.—L. H. Shaffer is organizing stock company for cultivation of tobacco.

San Antonio—Mercantile.—Chartered: San Antonio Mercantile Co., with capital of \$300,000, by J. R. Morris and others.

Texarkana—Telephone Company.—Long Distance Telephone Co. has been incorporated, with capital of \$200,000, by John B. King, W. L. Estes, F. M. Marriott, W. P. Harrison and others.

Vaughan—Cotton Gin.—Robertson Gin Co. has been incorporated, with capital of \$5000, by W. C. Robertson, E. M. Turner and W. M. Williams.

Wichita Falls—Mercantile.—Chartered:

Rosenstein Bros. & Co., with capital of \$30,000, by Harry Rosenstein and others.

## VIRGINIA.

Alexandria—Drug Company.—Ferris-Tone Corporation has been chartered, with capital of \$2500, for manufacture of medicines, drugs, etc., and Samuel H. Lunt, president; J. D. H. Lunt, secretary-treasurer.

Blackstone—Handle Company.—Chartered: Blackstone Hand-Shaved Handle Co., with capital of \$50,000, and Irby Moncure, president.

Bristol—Woodworking Plant.—J. A. Wilkerson of Meadow View, Va., will establish woodworking plant at Bristol.

Durmid—Machine Shops.—Wm. Minnigerode, Ninth and Main streets, Lynchburg, Va., has leased old railroad machine shop, roundhouse, etc., at Durmid, and will equip for general machine repair work.

Emporia—Hardware Company.—Chartered: Greenville Hardware Co., with authorized capital of \$10,000, and J. B. Bailey, president.

Emporia—Machine Company.—Emporia Machine Co., with authorized capital of \$5000, has been incorporated, with C. L. Vincent, president.

Fredericksburg—Telephone System.—City has granted franchise to Southern Bell Telephone & Telegraph Co. for installation of telephone system.

Freeling—Coal Mines.—Freeling Coal & Coke Co. has been organized, with capital of \$30,000, for developing coal mines, by W. R. Ricardi and others.

King and Queen C. H.—Cannery.—Mantap Canning Co. will enlarge cannery.

Lynchburg—Coal Mines.—Campbell County Mineral Co. has been incorporated, with capital of \$15,000, for developing mineral resources of Campbell county. H. T. Lusk of Wapakoneta, Ohio, is president; J. W. Ruppert, Spencerville, Ohio, vice-president; Thos. Whately, Kow, Va., secretary, and J. C. Clay, Marysville, Va., treasurer.

Lynchburg—Heating Apparatus.—New steam-heating plant will be installed in city jail. Address W. B. Bigbie, chairman council committee.

Norfolk—Woodworking Corporation.—Chartered: Woodworking Corporation of Norfolk, with capital of from \$10,000 to \$50,000. William B. East is president.

Norfolk—Art-glass Company.—Norfolk Art Glass Co. has been incorporated, with capital of from \$5000 to \$25,000, for manufacture of leaded art glass, beveling metal sash, silvering of mirrors, etc. Harry B. Burrows is president; address, 314 Granby street.

Norfolk—Land Improvement.—Chartered: Ocean View Residence Park Corporation, with authorized capital of \$50,000, and C. C. Cobb, president.

Norfolk—Land Improvement.—Hardy Homestead Co. has been organized, with capital of \$25,000, for improving the Hardy tract of land near Berkley as a residence section. Incorporators include J. W. Hough, W. L. Berkley, Alan G. Burrow and others.

Petersburg—Tobacco Factory.—Bland Tobacco Co. has awarded contract to Benjamin Harrison for erection of its proposed four-story brick building 50x50 feet.

Portsmouth—Oil-refining Company.—Oliver Oil Refining Co. will resume operations.

Richmond—Automobile Factory.—Southern Machine Co. has been organized with A. C. Goode, president; E. Harvey Spence, vice-president, and W. D. Leake, secretary-treasurer, for manufacture of automobiles.

Richmond—Mercantile.—Chartered: Cox & Shen Co., with capital of from \$5000 to \$15,000, and P. M. Fitzgerald, president.

Purcellville—Flour Mill.—John R. Smith & Co., conducting general milling business, has incorporated as the John R. Smith Milling Co., with capital of \$25,000. S. H. Hansbrough of Winchester, Va., is president; Shirley Carter of Winchester, vice-president; John R. Smith of Purcellville, general manager and treasurer.

Richmond—Mercantile.—Chartered: J. E. Quarles Co., with capital of \$5000. Chas. B. Cooke is president.

Ronoke.—Chartered: Southern Explorative Co., with capital of \$60,000, and E. W. Robertson, president.

Suffolk—Feed and Fuel Company.—Suffolk Feed & Fuel Co. has been incorporated, with authorized capital of \$25,000. Geo. L. Barton is president.

Williamsburg—Electric Plant.—William and Mary College will install \$5000 electric-light plant. Contract has been awarded.

Williamsburg—Knitting Mill.—Williamsburg Knitting Mill Co. will increase capital from \$50,000 to \$80,000 to enlarge its plant.

## WEST VIRGINIA.

Belington—Industrial.—Chartered: Belington Board of Trade, by J. E. Keyser and others.

Boone—Coal Mines.—Croft & Smoot of Boone have purchased for development coal properties in Boone county.

Clarksburg—Planning Mill, etc.—Parr Lumber & Planning Mill Co. has been incorporated, with capital of \$50,000, by Anson D. Parr, Clarence E. Parr, M. F. Snider and Lynn L. Horner, for manufacture of lumber.

Clarksburg—Chair Factory.—Colonial Chair Co. of Cortlandt, N. Y., will shortly award contracts for \$50,000 worth of buildings and machinery for its plant, which will be removed to Clarksburg. Lewis E. Hayes, president of the company, is at present in Clarksburg supervising plans.

Fairmont—Contracting.—Furgason & Edmonson Co., for conducting general contracting and construction business, has been incorporated, with capital of \$50,000, by Geo. A. Ferguson of Shinnston, W. Va.; Fred W. Edmonds of Fairmont, Francis Ferguson of Pittsburg, Pa., and others.

Fairmont—Machine Shops.—It is reported that the Baltimore & Ohio Railroad Co. will remove its Grafton (W. Va.) shops to Fairmont.

Fairmont—Coal Mines.—Mohawk Smokeless Coal Co. has been incorporated for development of coal mines, manufacture of coke, etc., with capital stock of \$450,000, by Thomas M. Sprowl of Huron, Ohio; Arthur Cobb of Louisville, Ky.; Frank B. Chilson, Painesville, Ohio; G. E. Beckwith, Cleveland, Ohio, and others.

Huntington—Oil and Gas Wells.—Virginia-Kentucky-Oil & Gas Co. has been organized, with capital of \$25,000, for development of 170 acres of oil and gas lands which it has leased. J. C. Beebe is president and general manager; R. E. Vickers, vice-president; P. A. Rutledge, secretary, and J. M. Hawkins, treasurer.

Lincoln County—Timber-land Development.—J. W. Hambrick of Huntington, W. Va., has purchased 2300 acres of timber land in Lincoln county, and will erect mills for developing the property.

Logan County—Coal Mines.—James M. Selvey and associates of Grafton, W. Va., have purchased and will develop 26,000 acres of coal lands in Logan county.

Marshall County—Coal Mines.—Summit Coal Co. has been organized in New York, with capitalization of \$10,000,000, for the development of 30,000 acres of coal land in Marshall and Ohio counties, West Virginia. Output will be 4000 tons a day. Geo. H. Proctor of New York is president; I. C. Smits of Connellsville, Pa., general manager; T. J. Yost, treasurer, and Henry B. Twombly, secretary. Address 170 Broadway, New York.

Morgantown—Slate Quarries, etc.—Superior Slate Manufacturing Co. has been incorporated, as recently reported, and organized with Orran W. Kennedy of Uniontown, Pa., president and general manager; Samuel M. Graham of Uniontown, treasurer; Chas. F. Kefover of Uniontown, secretary; Morton Van Voorhis of Van Voorhis, W. Va., assistant secretary, and Geo. B. Gerau of Morgantown, assistant general manager. Company has authorized capital of \$150,000, and character of the industry includes quarrying of slate for roofing purposes, slate bottoms for billiard tables, slate for mantel-pieces, toilets, etc.; will also manufacture fireproof brick for building purposes out of the waste. Plant has not yet been established, so far as construction of buildings and purchase of machinery is concerned. Main offices will be in Martinsburg, W. Va., and Uniontown, Pa. Address for further particulars Geo. B. Gerau.\*

New Cumberland—Coal Mines and Coke Ovens.—It is reported that the Hancock Coal & Coke Co., composed of New York and New Jersey capitalists, has purchased 23,000 acres of coal lands in Hancock county for \$2,300,000, and will open up mines at once; will also erect two large coke plants on Kings creek, in Hancock county. It is said that the real purchaser of the property is the United States Steel Corporation.

Parkersburg—Construction Company.—George Street Bridge Co. has been incorporated, with capital of \$100,000, by J. N. Camden, S. W. Goff, W. W. Walker, W. W. Jackson and others for conducting general construction business.

Parkersburg—Oil and Gas Company.—Berea Oil & Gas Co. has been incorporated, with capital of \$50,000, for development of oil, gas and coal lands by Thos. L. Shields, L. E. Simmons, Jr., G. D. Heaton and others.

Poe—Coal Mines.—Hughes Creek Coal Co. has been incorporated, with capital of \$50,000, for development of coal mines, by John Q.

Dickenson, S. H. Montgomery, John B. Lewis, Malcolm Jackson and others, all of Charleston, W. Va.

Shepherdstown—Knitting Mill.—Penant Knitting Mills is adding new machinery.

Union—Educational.—Chartered: The Union Academy, with capital of \$3000, by John L. Rowan, J. D. Logan, H. M. Brown and others.

Union—Oil Wells.—Brush Creek Oil & Gas Co. will operate in conjunction with the Fence Springs Oil & Gas Co. of Hinton, W. Va., in developing new oil and gas properties recently purchased at Cashmere.

Union—Telephone System.—Greenville Telephone Co. contemplates extending its system.

Weston—Well-drilling.—Board of directors of Hospital for Insane has awarded contract to Danser & Ford for drilling of six artesian wells.

West Virginia—Coal Mines, Coke Ovens, etc.—Lakeports—Atlantic Coal & Coke Co. of Pittsburgh, Pa., has been organized, with capital of \$25,000, for development of coal properties in West Virginia. J. H. Hemming, C. E. Pool, I. C. Ewing and W. A. Menster of Elkinsburg, Pa., and Henry Cooper of Belleview, Pa., are interested.

Wheeling—Coal Mines.—Hane & Hummer Coal Co. has been incorporated, with capital of \$25,000, by H. B. Hane, F. E. Guthrey, D. L. Hummer and others, all of Marion.

## OKLAHOMA TERRITORY.

Chester—Townsite Company.—Chester Townsite Co. has been incorporated, with \$1000 capital, by Hermon Heyon, F. L. Townsend and S. Ball.

Frederick—Telephone Company.—Southwest Telephone Co. has been incorporated, with capital of \$15,000, by J. A. McClenahan, E. L. James, C. D. Kirkpatrick and others.

Kingfisher—Mercantile.—Chartered: Logan, Snow & Co., with capital of \$100,000, by G. H. Logan and others.

Lawton—Mining.—Mountain Pass Mining Co. has been incorporated, with capital stock of \$1,000,000, by James M. Powers, Frank M. Robinson, F. G. Hanks, J. E. Jaervis and others.

Lawton—Gold Mines.—Rainbow Gold Mining Co. has been incorporated, with capital stock of \$1,000,000, by F. O. Ayeres, J. F. Winton, J. E. Compton and A. W. Allen.

Lawton—Gold Mines.—Frisco Mining & Milling Co. has been incorporated, as recently reported, for development of gold mine; capital to be invested \$200,000. D. I. Cooper, Lawton, O. T., is engineer in charge. Machinery or equipment has not as yet been purchased.

Lawton—Mining.—Golden King Mining & Milling Co. has been incorporated, as recently reported, for development of seven gold-bearing properties near Lawton, and will install necessary machinery at once to mine and mill the ore, using the cyanide process. N. F. Shabert, Lawton, O. T., is engineer in charge; capital to be invested \$50,000.

Lawton—Mining.—Chartered: Elk Mining & Milling Co., with capital stock of \$2,000,000, by John F. Hall, J. S. McDuffle, J. Robert Gilliam, John W. Gillespie and G. H. Goss.

Lawton—Mining.—McMillan Mining Co. has been incorporated, with capital stock of \$500,000, by August Jurgens and David G. Howell of Meers, D. A. McMillan of Bristol, I. T.; C. C. and A. E. Hammonds, J. N. Churchwell, D. A. Jacobs, J. W. Sampson and others.

Mt. Sheridan—Mining.—Middle West Gold & Silver Mining Co. has been incorporated, with capital stock of \$300,000, by S. P. Iles and F. C. Davis of Mt. Sheridan, J. L. Powers, Geo. E. Quinby, Fred Basom of Joplin, Mo., and others.

Oklahoma City—Construction.—Owen Construction Co. has been incorporated, with capital stock of \$500,000, by Thomas Marshall and others.

Pond Creek—Telephone Company.—Rural Telephone Co. has been incorporated, with capital of \$500, by H. F. Williams, J. H. Dunkin and A. D. Millian.

Shawnee—Mercantile.—Chartered: Longmire-Draper Mercantile Co., with capital of \$25,000, by W. W. and A. M. Longmire and J. M. Draper.

Snyder—Mining.—Oklahoma-Wichita Mining & Milling Co. has been incorporated, with capital of \$250,000, by O. E. Churchill, P. E. Griffen, W. B. Snook and J. M. Miller.

## BURNED.

Aberdeen, Miss.—W. W. Watkins' cotton gin; estimated loss \$6000.

Ashokla, N. C.—Machine shops and roundhouse of the Wellington & Powellsville Railroad; estimated loss \$10,000.

Baltimore, Md.—Asphalt and crushing plant of Isaac S. Filbert; estimated loss \$4000.

Cornettsville, Ky.—Cornettsville Hotel damaged to extent of \$3000.

Dalton, Ga.—W. F. Summerour's cannery factory.

Fayetteville, N. C.—Weed Distilling Co.'s plant; estimated loss \$5000.

Jackson, Miss.—J. W. Johnson's cotton gin; estimated loss \$2000.

Jefferson City, Tenn.—Smith, Huggins & Co.'s flour mill and warehouse; estimated loss \$10,000.

Lackey, Ky.—Plant of Lackey Milling Co.; loss \$4000.

Lawsonia, Md.—Aubury Shirt Factory; estimated loss \$8000.

Monroe, La.—Monroe Grocery Co.'s warehouse; estimated loss \$15,000.

Palestine, Texas.—Cotton gin and grist mill of M. Reed.

Washington, D. C.—S. S. Daish & Sons' grain elevator; estimated loss \$10,000.

Webster, Md.—Harry Smith's machine shops; estimated loss \$5000.

### BUILDING NOTES.

\*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Baltimore, Md.—Church.—Permit has been issued to Metropolitan Methodist Church for erection of three-story brick Sunday-school hall to cost \$20,000.

Baltimore, Md.—Church.—Bethlehem Lutheran congregation has awarded contract to John P. Teal at \$15,000 for erection of its proposed new stone structure.

Baltimore, Md.—Studio.—Harry J. Jeffress will erect three-story brick studio to cost \$4000, and has awarded contract for same to H. H. MacLellan.

Baltimore, Md.—Dwellings.—Edward J. Gallagher will erect row of two-story brick houses to cost \$3000 each.

Baltimore, Md.—Store and Dwelling.—Wills & Mason have contract to build two-story store and dwelling for A. D. Clemens.

Baltimore, Md.—Engine-house.—Board of Awards will open bids October 21 for erection of fire-engine house on Patterson Park avenue, also for hot-water heating apparatus to be put in No. 15 engine-house on Lombard street. Bids must be in separate sealed envelopes addressed to Board of Awards and left with City Register Harry F. Hooper, City Hall, Baltimore, Md. Each proposal must be accompanied by certified check for \$300. Plans and specifications can be seen at office of inspector of buildings. Bond required and usual rights reserved.

Baltimore, Md.—Store and Dwelling.—Geo. Hoshell will erect three-story brick and stone store and dwelling 18x72 feet at cost of \$5000.

Bedford City, Va.—Hotel.—P. W. Lytle will erect hotel, as recently reported, after plans by Architect Huggins of Roanoke, Va. Building will be of brick, 40x80 feet, and cost about \$15,000.\*

Brewton, Ala.—Courthouse.—Bill authorizing Escambia county to issue \$30,000 of bonds for erection of new courthouse has been approved. Address county clerk.

Bristol, Fla.—Courthouse.—Liberty county will build frame courthouse with fireproof and burglar vaults; Cark Baker, supervising architect.\*

Buford, Ga.—Business Building.—S. H. Busha will erect three-story business building 100x50 feet.

Camden, S. C.—Hotel Improvements.—Hobkirk Inn, F. W. Eldridge, proprietor, is being improved at cost of \$10,000.

Canton, Miss.—Clerk's Office, etc.—Board of supervisors for Madison county has advertised that bonds will be issued to build fireproof chancery clerk's office and to remodel county jail. Plans are on file for remodeling and improvement of the jail, and board asks for plans and specifications for clerk's office to cost not more than \$5000.

Charlotte, N. C.—Residence.—H. Baker will erect \$10,000 residence in Dilworth.

Chattanooga, Tenn.—Business Building.—Trotter Bros. have had plans and specifications made for erection of five-story brick building; contract will be awarded at once.

Chattanooga, Tenn.—Library.—A. N. Sloan, president, will open bids October 29 for erection of Carnegie Library building. Certified

check for \$300 must accompany each bid. Bond required and usual rights reserved. Board of directors will buy all furniture and hardware and make own contracts for heating, lighting and plumbing. Total contract will amount to \$45,000 for building proper. Plans and specifications can be seen at president's office or at office of R. H. Hunt, architect.

Chattanooga, Tenn.—Business Building.—Stone Fort Land Co. has had plans made by W. T. Downing for erection of five-story building 60x150 feet, to cost \$50,000, which will be occupied by Trotter Bros., grocers.

Clarksburg, W. Va.—Building.—Empire Building Co. has accepted plans and specifications of Holmboe & Lafferty for erection of proposed six-story building.

Clemson College, S. C.—Building.—H. C. Morrison of Augusta, Ga., has contract for erecting the new three-story brick and stone agricultural building (previously reported) at Clemson College; building will be 150x190 feet, and cost \$50,000.

Columbia, Tenn.—Courthouse.—Maury county will appropriate \$100,000 for erection of courthouse. Address county clerk.

Dallas, Texas.—Textile Building.—The Agricultural and Mechanical College has accepted plans by J. E. Sirrine of Greenville, S. C., for erection of building to be equipped for textile instruction; structure to be of brick, two stories high, 54x174 feet, power plant and basement to cost \$25,000. Bids for erection will soon be asked. Dr. D. F. Houston is president of the college.

Dartha, Va.—Dwellings.—Smith & Hampson have contract for building seventy-five miners' dwellings for Dartha Coal Co.

Earlington, Ky.—Residence.—W. L. Gordon, Jr., will erect two-story residence.

El Dorado, Ark.—Jail.—Union county will build \$25,000 jail. Address the county clerk.

Fayetteville, N. C.—Sanitarium.—Dr. W. H. Kugler of Chester, Pa., has purchased property near Fayetteville, and will build sanitarium.

Florence, Ala.—City Hall.—City has purchased site and will soon begin erection of \$10,000 City Hall. Address The Mayor.

Fort Morgan, Ala.—Guardhouse Improvement.—A. D. Raymond, quartermaster, will receive proposals in triplicate until November 9 for constructing extension to and alterations in guardhouse. United States reserves usual rights. Information furnished on application.

Frostburg, Md.—Storage Building.—John W. George of Cumberland, Md., has contract to build storage building for the German Brewing Co. at Frostburg.

Gainesville, Ga.—Store Buildings.—J. W. W. Simmons will erect brick store buildings.

Gaffney, S. C.—Building.—Bids will be opened October 17 for erection of three-story brick business block. Plans and specifications at office of McMichael & Hunter, Charlotte, N. C., and F. G. Stacy, Gaffney.

Goshen, Va.—Sanitarium.—Dr. Frank P. Webster of Norfolk, Va., has purchased Hotel Alleghany at Goshen, and will convert it into sanitarium.

Greensboro, N. C.—Business Block.—H. T. Ham has purchased site at \$5000 and will erect business block.

Greenville, Miss.—Club Building.—Elysian Club has awarded contract for erection of its proposed \$20,000 building.

Greenville, S. C.—School.—Plans of Charles E. Choate of Augusta, Ga., have been accepted for proposed new school building.

Houston, Texas.—Club Building.—Thalian Club has purchased site for \$10,000 and will erect three-story building to cost \$25,000.

Jackson, Miss.—Depot.—Union depot at Jackson will be enlarged and improved. Address O. M. Dunn, assistant general superintendent of the Illinois Central Railroad, New Orleans, La.

Jonesboro, Tenn.—Business Block.—E. A. Shipley will erect three-story brick business block 60x100 feet. Architect has not as yet been employed to prepare plans.

Kansas City, Mo.—Office Building.—Gumbe Building Co. has obtained permit for erection of its proposed six-story brick and stone office building, which will be 72x106 feet and cost \$78,000.

Kingwood, W. Va.—Armory and Opera-house.—Kingwood Armory has been incorporated, with capital of \$5000, for building opera-house and armory, by A. B. McCrum, J. B. Ford, P. J. Crogan, J. L. Brown and others.

Lexington, Va.—Science Hall.—W. B. Sneed & Co. of Lynchburg, Va., have con-

tract for erecting new science hall at Washington and Lee University.

Lexington, Ky.—Y. M. C. A. Building.—Young Men's Christian Association building will be erected after plans by Richards, McCarty & Buiford of Columbus, Ohio, and will be four stories, 111x66 feet; cost \$45,000.

Lockesburg, Ark.—Courthouse.—New courthouse to cost \$25,000 will be erected. Plans and specifications have not as yet been prepared. Address county clerk.

Louisville, Ky.—Temple.—Jewish congregation will erect new temple. Address Rabbi Einelow.

Macon, Ga.—Academy.—Academy of Music will be enlarged and improved at cost of \$40,000. Plans will be prepared at once.

Macon, Miss.—Courthouse Improvement.—Z. T. Dorroh, clerk of the board of supervisors, Macon, Miss., will open bids November 2 for repairing courthouse according to plans and specifications on file. Repairs consist of underpinning and putting new foundation around three sides of said building.

Martinsville, Va.—Building.—John T. Wilson of Richmond, Va., has contract at \$27,900 for erection of proposed public building at Martinsville.

Meridian, Miss.—Courthouse.—C. M. Rubush has contract at \$100,638 for erection of new courthouse, for which bids were recently advertised in these columns.

Monroe, La.—Market-house.—J. M. Breard, chairman public building committee, Monroe, La., will open bids November 2 for erection of market-house building according to plans and specifications prepared by L. M. Wethers, architect, Memphis, Tenn., which can be had from J. M. Breard and also at office of architect, Room 25, Cotton Exchange Building, Memphis, Tenn. Certified check for \$500 must accompany each bid. Bond required and usual rights reserved.

New Decatur, Ala.—Y. M. C. A. Building.—L. W. Allen has contract for erecting \$30,000 Y. M. C. A. building.

Newnan, Ga.—Hotel.—A. R. Burdett, C. B. Glover and others will erect three-story brick structure 65x150 feet for hotel purposes.

Newport News, Va.—Elks' Building.—Newport News Lodge, No. 315, B. P. O. E., has purchased site for erection of its proposed new building. Trustees are W. T. Hopkins, R. J. Mackey and W. H. L. Kent.

Norton, Va.—Business Building.—E. H. Ouids will erect large business building.

Ozark, Ark.—Courthouse.—Franklin county contemplates erection of \$25,000 courthouse. Address county clerk.

Petersburg, Va.—Hotel.—W. W. Robinson has contract for proposed improvements to Chesterfield Hotel.

Phenix City, Ala.—Lodge Building.—Phenix City Lodge, No. 141, of Odd Fellows will erect new two-story brick building.

Pound, Va.—Store Building.—Sowards & Sowards will erect \$3000 store building; contract to let.

Raleigh, N. C.—Gymnasium.—University of North Carolina will erect \$25,000 gymnasium, as recently reported. Plans and architects as yet undecided upon.

Raleigh, N. C.—Masonic Temple.—O. A. Robins & Co. have completed designs for proposed Masonic temple building at Raleigh. Contract for erection will shortly be awarded.

Raleigh, N. C.—Church.—First Baptist Church (colored), W. T. Coleman, pastor, 5118 Wilmington street, will erect new brick church 100x50 feet. W. P. Rose, Raleigh, will be the architect.\*

Richmond, Va.—Dwellings.—Gilbert J. Hunt will erect five three-story brick dwellings at cost of \$30,000.

Rome, Ga.—City Hall.—Work will soon be commenced on erection of proposed \$10,000 City Hall. Address The Mayor.

Seguin, Texas.—Church.—Methodist congregation will erect \$10,000 edifice. Address the Pastor.

Spring Hope, N. C.—School.—City will erect school building, as previously reported, to cost \$6000. Contract for building not awarded. Address S. E. Eure.

St. Louis, Mo.—Business Building.—Eastern parties have had plans made for erection of its proposed six-story brick and stone office building, which will be 72x106 feet and cost of W. W. Culver.

Tampa, Fla.—Lodge Building.—Knights of Pythias will erect new building.

Thomasville, N. C.—Residence.—W. I. Montgomery of High Point, N. C., has contract to erect \$4000 residence for J. L. Armfield.\*

Warrensburg, Mo.—Gymnasium.—Dr. J. I. Anderson, president board of regents of State Normal School, will open bids November 13 for erection and completion of gymnasium to cost not more than \$47,500 and to be built in accordance with plans, details and specifications prepared by Geo. E. McDonald, 720 McGee street, Kansas City, Mo., and which are on file at Normal School and at office of architects. Each bid must be accompanied by certified check for \$300. Bond required and usual rights reserved.

Washington, D. C.—Union Station.—The Pennsylvania Railroad Co. has decided not to let to contract the erection of its proposed \$5,000,000 union station in Washington, and will erect the building itself. Roydhouse, Areay & Co. of Philadelphia, Pa., are to superintend the construction.

West Point, Va.—Bank Building.—L. B. Mumford Banking Co. will erect brick building.

Whitesburg, Ky.—Jail.—Letcher county will improve jail at cost of \$4000. Address R. D. Lewis.

Wickliffe, Ky.—Courthouse.—Contract for building new courthouse will be let at public outcry at courthouse door on October 21; said building to be constructed in accordance with plans and specifications adopted and in custody of county clerk of Ballard county; W. M. Powell, W. J. Hagood and Henry Watwood, committee.

Winder, Ga.—Church.—Methodist congregation will erect \$10,000 church; Rev. A. M. Williams, pastor.

Winston-Salem, N. C.—Hotel.—H. C. Risdon, 45 Bond Building, Winston-Salem, D. O., and associates are organizing the Hotel Forsyth Co. for erection of four-story hotel 100x200 feet, to cost \$80,000. Crosby & Warren of Paterson, N. J., and New York city are the architects.

Yellville, Ark.—Courthouse.—Marion county will build \$30,000 courthouse. Address county clerk.

### RAILROAD CONSTRUCTION.

#### Railways.

Alamos, Sonora, Mexico.—The Southern Sonora & Alamos Railroad Co. is reported to have secured a concession for building a railroad from Alamos to Navajos, twenty-two miles.

Anderson, S. C.—The city of Anderson has voted \$50,000 worth of bonds to aid the proposed Tennessee, Georgia & South Carolina Railroad.

Atlanta, Ga.—Mayor Howell is quoted as saying that a Chicago capitalist has under consideration a plan for an electric railway from Atlanta to Dawsonville.

Atlanta, Ga.—Construction is reported under way near Marietta on the Atlanta & Marietta Electric Railway. The line will be about eighteen miles long.

Austin, Texas.—The Trinity & Brazos Valley Railway Co. is considering a plan to build from Mexia to Beaumont, about 130 miles. R. H. Baker of Austin is vice-president and general manager.

Beaumont, Texas.—Mr. Ed Kennedy writes the Manufacturers' Record that the proposed Houston, Liberty & Sour Lake Interurban Line will be fifty-seven miles long. It will connect with the Beaumont & Sour Lake road, and nearly all of the right of way has been secured. The track will be laid with 72-pound T rails. The bonds have been contracted for and will be handled by the Municipal Bond & Securities Co. of Cincinnati, Ohio.

Biloxi, Miss.—The franchise for an electric railway from Biloxi to Pass Christian has been extended for another year.

Birmingham, Ala.—The United States District Court has authorized H. W. Coffin, receiver for the Donaldson Construction Co., to sublet its unfinished work on the East & West Railroad to Brewer & Jones.

Brunswick, Ga.—Reported that the Brunswick & Birmingham Railroad has purchased the Hawkinsville & Florida Southern Railroad, and will build a connection between the roads. Bird M. Robinson is president of the Brunswick & Birmingham.

Chihuahua, Mexico.—A preliminary survey has been made for a branch from the Chihuahua & Pacific Railroad from El Carpio Station to Bincon, about sixty miles. C. L. Graves is general manager, and H. W. Edwards, chief engineer.

Gulfport, Miss.—President J. T. Jones of the Gulf & Ship Island Railroad Co. writes the Manufacturers' Record pronouncing as entirely without foundation the report that he is connected with or interested in the proposed Natchez & Gulf Railroad.

Kansas City, Mo.—The Kansas City, Mexico & Orient Railway is reported to be making two lines to reach the Ocampo mining district in Mexico, one starting from Boy-

cone and the other from Minaca. M. P. Paret is chief engineer at Kansas City.

Kansas City, Mo.—Some track is reported laid on the electric railway from Kansas City to Olathe, Kan., eighteen miles.

Knoxville, Tenn.—W. J. Oliver & Co. are reported to have completed about ten miles of grading along the Little Tennessee river for the Rabun Gap extension of the Southern Railway, and are now working toward Maryville.

Lawton, O. T.—A contract has been awarded to the Missouri & Kansas Construction Co. to build part of the Colorado, Oklahoma & Texas Railroad from Lawton to Duncan.

Lexington, Va.—Reported that the proprietors of the Buena Vista Extract Works will build a narrow-gauge railroad eight miles long from Vesuvius Station to Montebello, through Tye river gap.

Lineville, Ala.—The sum of \$12,000 is reported raised for the proposed railroad from Lineville to Pyrlton.

Louisville, Ky.—The report that the Louisville & Nashville Railroad will build an extension from Pyrlton to Roanoke, Ala., is officially denied.

Memphis, Tenn.—Lorinuer, Gallagher & Walsh of Chicago have the contract for and have just begun the work of elevating the Illinois Central Railroad tracks in the vicinity of the Wolf and the Loosahatchie rivers.

Memphis, Tenn.—The Union Railway will, it is stated, build a large freight yard immediately east of Kansas City Junction, the yards to have between six and seven miles of track.

Memphis, Tenn.—The Shelby County Traction Co. has filed its charter. It proposes to build an interurban electric railway from Memphis to Collierville, eighteen miles, via Aulon, Buntyn, White Station, Ridgeway, Germantown, Forest Hill, Balleys and Noville. The incorporators are T. J. Latham, H. C. Williamson, Thomas Wellford, J. M. Goodbar, J. M. Hill and I. B. Hudson.

Mexico, Mexico.—The National Railroad of Mexico is reported to be surveying for a branch from the City of Mexico to La Blanca mines, twenty-eight miles. R. T. Macdonald is chief engineer.

Mobile, Ala.—It is stated that the northern terminus of the Mobile, Jackson & Kansas City Railroad will be at Bollivar, Tenn., instead of Jackson, Tenn., as was first proposed. The distance from Middleton to Bollivar is fifty-five miles, as compared with seventy-five miles to Jackson. W. W. Hayden is engineer of construction.

Moundsville, W. Va.—W. D. Alexander of Moundsville has, it is reported, applied for an electric railway franchise from Moundsville to McMechen.

Nashville, Tenn.—A survey has been made for the proposed McMinnville, Woodbury & Nashville Electric Railway by Felix R. Smith and H. B. Wright. It is also stated that rights of way have been secured, and that the construction contracts are to be let within a month.

Nashville, Tenn.—At the annual meeting of the Tennessee Central Railroad it was announced that the line was practically completed from the bridge at Nashville to Clarksville, and that all will be finished to Hopkinsville by October 20.

Paden City, W. Va.—The Paden City, Middlebourne & Salem Railroad Co. has been chartered to build and operate an interurban railway connecting the three places. The incorporators are Thos. A. Watkins, George R. Wallace of Pittsburgh, Pa.; Robert Miller, Paden City, W. Va.; George E. Work of Sistersville, and E. L. Robinson of New Martinsville.

Pine Bluff, Ark.—McArthur Bros. of Chicago are reported to have the grading contract for the Pine Bluff & Western Railway from Sherman to Benton, twenty-five miles, and are to begin work at once. W. T. Radford is chief engineer at Pine Bluff.

Roanoke, Va.—The Norfolk & Western Railway is reported to have finished a survey from Mendota, Va., to Narrows, on the Radford division of the Norfolk & Western, 107 miles, but it is not known whether the line will be built. C. S. Churchill is chief engineer.

Rogers, Ark.—Mr. J. A. C. Blackburn writes the Manufacturers' Record concerning the plan to build an electric railway from Eureka Springs to Huntsville, about thirty miles, saying that the company has not yet organized, but that the road can be built cheaply, as the line selected follows a dividing ridge for almost the entire distance, and only one bridge will be necessary. It is also contemplated to extend the line fifty or sixty miles further southeast beyond the head of Buffalo.

Shawnee, O. T.—The Shawnee & Northeastern Railway, capital \$5,000,000, has been chartered to build a railroad from Wichita Falls, Texas, to Claremore, I. T., about 300 miles. The incorporators are A. E. Nelson, C. W. Kerfoot, H. G. Beard, B. B. Blakney, W. H. Maben, W. F. Callahan, M. J. Bentley and D. W. Bell, all of Shawnee.

Stockton, Ark.—W. H. Wood of Nevada has made a survey from Stockton to Eldorado Springs, nineteen miles, for the possible construction of a railroad.

St. Louis, Mo.—The Wabash Railroad Co. has decided to issue \$10,000,000 of bonds for terminal improvements at various points, including St. Louis and Kansas City.

St. Louis, Mo.—Reported that the St. Louis, Iron Mountain & Southern Railroad has secured seventy-five acres of land for terminals at Helena, La. H. Rohwer is chief engineer at St. Louis.

Wichita, Kan.—The Wichita, Arkansas & Denver Railroad Co. has been granted a charter to build a line from Denver, Col., through Kansas and Oklahoma to Henrietta, I. T., about 650 miles. The stockholders are W. F. Brown of Moran, Kan.; F. M. Cyes, John Roy, A. J. Roy and C. A. Latham, all of Wichita.

Wichita Falls, Texas.—Concerning the report that the Wichita Valley Railway will build from Wichita Falls northeast to Benvenue, W. E. Kaufman, secretary and treasurer, writes the Manufacturers' Record: "We are now completing location of twenty-five miles of road from Wichita Falls in a northeast direction to Red river, and will receive bids for grading about November 1. John W. Field is engineer in charge at Wichita Falls, Texas, where profiles can be seen."

Wichita Falls, Texas.—Reported that the Wichita Valley has let the contract for building an extension from Wichita Falls to Benvenue, twenty-five miles. Col. Morgan Jones is president.

Wise, Va.—A letter to the Manufacturers' Record says that construction has begun on the Virginia & Kentucky Railroad from Ramsey to Norton, three miles, making the line eight miles long.

#### Street Railways.

Eufaula, Ala.—A franchise has been granted by the city council to the Eufaula Railroad Co., which is composed of J. P. Foy, B. B. McKenzie, R. A. Ballou, C. A. Martin, H. C. Holleman and A. L. Brassell. An electric railway is to be built in the city and also as far as Abbeville, about twenty-five miles.

Fort Worth, Texas.—An electric railway to Rosen Heights, two and one-half miles, will, it is stated, be built by Sam Rosen and H. A. Perlstein.

Greenville, Texas.—Col. R. F. Sherman and others are reported interested in a plan to build an electric street railway in Greenville.

Greenwood, Miss.—The Greenwood Electric Railway Co. proposes to extend its line from Greenwood to Black Hawk, about eighteen miles.

Jackson, Miss.—Reported that the Jackson Railway & Electric Light Co. will build several extensions on which General Manager Lorenz is now figuring.

Louisville, Ky.—Construction work is being pushed on the Jeffersontown Electric Railway, it being proposed to have it in operation by December 1.

Opelika, Ala.—Rush Taylor of Opelika has applied to the city council for an electric street railway franchise. It is also proposed to extend the line to Auburn.

Richmond, Va.—The work of rebuilding the Seven Pines Railway will, it is stated, begin immediately.

#### Machinery, Proposals and Supplies Wanted.

**Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.**

Alloys.—See "Saws."

Ammunition Hoists.—E. Eveleth Winslow, captain engineers, engineer office, U. S. A., Room 2, custom-house, Norfolk, Va., will

open bids November 11 for furnishing and installing chain ammunition hoists at Fort Monroe, Va. Information furnished on application.

Boiler.—See "Elevating and Conveying Machinery."

Boiler.—R. P. Paddison, Point Caswell, N. C., wants 30-horse-power horizontal return tubular marine boiler for small steamboat.

Boiler.—Battey Machinery Co., Rome, Ga., is in market for two 150-horse-power second-hand return tubular boilers.

Boilers.—See "Can-factory Equipment."

Boilers.—Fielder & Allen Manufacturing Co., Atlanta, Ga., desires prices on second-hand boiler twelve to twenty horse-power, low pressure, suitable for attaching to small dry-kiln; also desires prices on 75-horse-power second-hand boiler f. o. b. Atlanta.

Boiler and Engine.—See "Concrete Mixer."

Boiler and Engine.—W. A. Mulcahy, 237 Carroll street, Woodberry, Baltimore, Md., wants prices on 35-horse-power horizontal engine and 30 horse-power vertical boiler.

Bone-meal Machinery.—Atlanta Metal & Bottle Co., Atlanta, Ga., wants catalogues and prices, etc., from manufacturers of bone-meal machinery.

Brick Machinery.—F. B. King, Houston, Texas, will want hydraulic brick machinery, tiling machinery and kaolin mills.

Brick Machinery.—See "Quarrying Equipment."

Brick Machinery.—Thorsby Lumber & Manufacturing Co., Room 12, 78 La Salle street, Chicago, Ill., will open bids on brick machinery.

Bridge Construction.—J. C. Herring, city engineer, Jefferson City, Mo., will later on receive bids on superstructure for bridge to be 39-foot span, 18-foot roadway, five-foot sidewalk on one side, pinto girder, whipple truss proportioned to carry a load of 150 pounds to square foot.

Building.—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will open bids November 9 for construction (except heating apparatus, electric wiring and conduits) of the extension of United States postoffice and courthouse at Kansas City, Mo., in accordance with drawings and specifications, copies of which may be had at office of supervising architect or at office of custodian at Kansas City.

Building Material.—De Leon & Lopez, Atlanta, Ga., want prices on terra-cotta, art mosaic tile, art glass, composition capitals, etc.

Building Material.—Cowell & Love, Huntsville, Ala., want prices on gray pressed brick, mosaic tile, interior decorations, oak finish, etc.

Building Material.—W. I. Montgomery, High Point, N. C., wants building material.

Building Material.—P. W. Lytle, Bedford City, Va., wants heating apparatus, brick, etc., for hotel building.

Building Materials.—W. T. Coleman, 5118 Wilmington street, Raleigh, N. C., wants prices on brick, lumber, slate, doors, stained windows, window and door frames, steel ceiling, etc., for church.

Can-factory Equipment.—Southern Can Co., Limited, Fred. D. Becker, secretary, 306 Hennen Building, New Orleans, La., wants bids for either steam, gasoline or electric-power boilers, automatic canmaking machinery tools, belting and shafting for 25-horse-power basis. Address secretary for further details.

Cannery Machinery.—H. L. Stricker, Calvert, Texas, wants estimates on machinery for cannery.

Canning Factory.—Brown-Kyle Company, Houston, Texas, wants addresses of manufacturers of small canning outfits; power from six to twelve horse-power.

Concrete Mixer.—Lawrence Stone & Construction Co., 3431 Cherokee street, St. Louis, Mo., wants concrete mixer, elevating and hoisting machinery for conveying stone to and from cars, overhead cable or trolley transfers and 8 to 10 horse-power boiler and engine.

Dredging Machinery.—Savannah-Florida Phosphate Co., Hernando, Fla., wants machinery complete for dipper dredge, one to one and one-half yard capacity bucket.

Drilling Equipment.—Georgia Vitrified Brick & Clay Co., Augusta, Ga., wants information relative to apparatus suitable for drilling through hard shale for blasting.

Electrical Equipment.—See "Can-factory Equipment."

Electrical Equipment.—E. O. Painter & Co., Deland, Fla., want electrical generator of about fifty lights.

Elevating and Conveying Machinery.—Sea-

board Product Co., Georgetown, S. C., D. H. Greene, president, wants locomotive boiler, sixty to eighty horse-power, elevating and conveying machinery.

Elevating Equipment.—See "Concrete Mixer."

Engine.—J. L. Roberson, Naylor, Ga., wants 20-horse-power engine, steam gauge and ball springs.

Heating Apparatus.—John P. Teal, Baltimore, wants prices on heating apparatus for church. Address 971 Broadway.

Heating Apparatus.—See "Building Material."

Heating System.—Contract for installing direct system of steam heating in school building will be awarded October 26. Address D. C. DuPre, secretary, Greenwood, S. C.

Hoisting Machinery.—See "Concrete Mixer."

Knolin Mills.—See "Brick Machinery."

Knitting Machines.—Knoxville Knitting Mills Co., Knoxville, Tenn., wants information regarding full-fashioned knitting machinery, 200-needle gauge, for manufacturing fine underwear.

Laundry Equipment.—D. E. Whetstone, Lake City, Fla., wants second-hand wringer, one washer and one sheet and napkin ironer.

Library Equipment.—Cowell & Love, Huntsville, Ala., want prices on steel book stacks, window screens, furniture, rugs, etc., for library.

Machinery.—Southern Engineering Co., Perry Moses, manager, Sumter, S. C., wants to correspond with manufacturers of machines and mechanical appliances who wish to establish an agency with territory in the Carolinas, Georgia and Florida.

Magnalium.—See "Saws."

Mill Supplies.—See "Can-factory Equipment."

Mining Equipment.—John L. Ray, Albertville, Ala., wants machinery for development of manganese mines.

Paving.—J. C. Herring, city engineer, Jefferson City, Mo., will open bids October 26 for macadamizing about 3450 square yards of street and alley and for construction of 900 feet of double guttering and 1080 lineal feet of combined curb and gutter.

Postoffice Fixtures.—M. C. Wilcox, Mt. Airy, Ga., wants names of firms furnishing postoffice fixtures.

Pottery Equipment.—B. Remmers & Sons, 325 The Bourse, Philadelphia, Pa., are in the market for machines for making common flower pots from clay.

Quarrying Equipment.—Superior Slate Manufacturing Co., Geo. B. Gerow, manager, Morgantown, W. Va., will purchase complete equipment for quarrying slate and for manufacture of fire-brick for building purposes.

Saw-mill Machinery.—Thorsby Lumber & Manufacturing Co., Room 12, 78 La Salle street, Chicago, Ill., wants estimates on saw-mill machinery.

Saws.—Chas. A. Scott, Granite Building, Rochester, N. Y., wants addresses of makers of a hack-saw blade termed the "Horseshoe Brand;" also wants addresses of firms from whom can be bought at wholesale rates an alloy termed "Magnalium."

Sewer Pipe.—J. C. Herring, city engineer, Jefferson City, Mo., will receive bids for about 1783 feet of pipe sewer, eight and ten inches, with 3 M. H. s, 2 F. T. s and 4 L. H. s.

Shingle Machine.—A. M. Prince, Holly Ridge, N. C., wants to purchase shingle machine.

Shingle Machinery.—Bolinger Bros., Joppa, Tenn., want complete outfit of shingle machinery.

Spring Motors.—F. E. Church, 8 Tennis street, Albany, N. Y., wants addresses of parties manufacturing or handling spring motors.

Steel Cages.—I. T. Foster, chairman county court, Morristown, Tenn., wants bids on two steel cages for jail.

Street Paving.—D. D. Bryan, city secretary, Houston, Texas, will open bids October 19 for construction of vitrified brick pavement as per plans and specifications on file in city engineer's office. Certified check for \$1500 must accompany each bid. Bond required and usual rights reserved.

Street Paving.—George Edward Smith, mayor, Frederick, Md., will open bids October 23 for paving approximately 1775 square yards with vitrified fire-clay paving block and furnishing and setting 780 lineal feet of dressed granite curbstones. Detailed plans may be seen at mayor's office, and specifications and forms of proposals may be obtained from the mayor, or from T. Chalkley Hatton, consulting engineer, Wilmington,

Del. Each bid must be accompanied by certified check for \$250. Usual rights reserved.

Swing Factory.—Bolinger Bros., Joppa, Tenn., want machinery for lawn-swing factory.

Tank Cars.—Bowen & Street Equipment Co., Norfolk, Va., is in market for tank cars, and wants prices, location and condition of same.

Tiling Machinery.—See "Brick Machinery."

Vaults.—County commissioners Liberty County, Bristol, Fla., want estimates on vaults for courthouse.

Water Mains.—S. Behrends, chairman, Wilmington, N. C., will open bids October 17 for laying and constructing 949 feet of six-inch cast-iron water mains, with hydrants, increasers, valves and other appurtenances as required by plans and specifications, which may be seen at city clerk and treasurer's office. Usual rights reserved.

Water Motor.—"Yankee" Meere, proprietor of the Drummer Printery, Lecompte, La., is in market for two-horse-power water motor to run one 8x12 and one 14½x22 press.

Water-works.—John G. Decker, mayor, Owensboro, Ky., will open bids October 31 for following items for system of water-works: Brick pumping station and chimney, two concrete reservoirs and suction well,

three water-tube boilers, two feed pumps and feed-water heater, two compound horizontal duplex condensing pumping engines of 3,000,000 gallons per twenty-four hours capacity each, with surface condensers; Corliss cross-compound air compressor of 2300 cubic feet of free air per minute capacity, with surface condenser, intercooler and receiver; steam, exhaust, air, suction and discharge piping of the station. Plans and specifications are on file in city engineer's office and at office of consulting engineer, John P. Force, 37-42 Dispatch-Butler Block, Columbus, Ohio. Certified check for 5 per cent. of amount of each bid must accompany proposal. Bond required and usual rights reserved.

Well-drilling.—B. B. Buck, captain and quartermaster Sixteenth Infantry, constructing quartermaster, Fort McPherson, Ga., will receive bids in triplicate until October 20 for furnishing all labor and material necessary and sinking one 10-inch tubular deep well. Specifications and full information furnished on application. United States reserves usual rights.

Window Screens.—See "Library Equipment."

Woodworking Machinery.—W. H. Nicker-son, Morrison, Va., wants shingle machine and slack barrel head rounder.

the pumps recommended by the Associated Factory Mutual Insurance Companies.

#### Use Powhatan Clay Bricks.

In the erection of Southern buildings of all kinds Southern-made bricks have been largely used. The Powhatan Clay Manufacturing Co. of Richmond, Va., has been prominent in furnishing the supply. It reports the following structures as those which have used its product recently: Courthouses at Albany, Abbeville and Washington in Georgia; Southern and Norfolk & Western station at Winston, N. C.; Atlantic Coast Line stations at Washington and Wilmington, N. C.; Soldiers' Home buildings at Johnson City, Tenn.; Hibernia Bank and Trust Building, New Orleans; Gibbes Memorial Art Building, Charleston, S. C.; Bank of Georgetown, Georgetown, S. C.; Winnie Davis Memorial Hall, Athens, Ga., and various others. Powhatan product includes cream white, buff, silver gray, salt and pepper gray, iron spot and other face bricks.

#### Minnigerode's Machinery Business.

Many machinery warehouses are catering to the great demand in the South for mechanical equipment of all kinds. Both new and second-hand equipment is called for to be installed in new and enlarging manufactures. Wm. Minnigerode of Ninth and Main streets, Lynchburg, Va., has been supplying a large clientele, and in order to even more efficiently and promptly serve his customers is greatly improving his facilities. Mr. Minnigerode has leased the large machine shop, roundhouse and office of the Norfolk & Western Railway at Durmid, and will have a complete modern equipment for repair work of all kinds. He will buy and sell both new and second-hand equipment, putting the latter in thorough repair before offering it for sale. The Minnigerode stock includes engines, boilers, pumps, hoisting engines, rock drills, rock crushers, locomotives, cars, machinery for contractors, railroads, mining companies, lumber mills, etc.

#### Price Machinery Co.

That the South is demanding the very best possible machinery in its multitude of industrial enterprises is evident in the number of the leading machinery builders represented in that section. Norfolk, Va., is a center for the distribution of mechanical equipments of all kinds, and in that city there is located the S. M. Price Machinery Co. This corporation is well known to Southern buyers, and it reports that present inquiries indicate a large volume of trade to be closed and attended to during the next several months. The Price Company represents such well-known designers and builders as the Erie City Iron Works, American Tool Works Co., Laidlaw-Dunn-Gordon Company, Middletown Machine Co., Dodge Manufacturing Co., Lambert Hoisting Engine Co., Detroit Oak Belting Co., the Lunkenhelmer Company and others. These are the representative makers of boilers, engines, machine tools, pumps, steam specialties, etc.

#### Prevent Shipwrecks.

The Commercial News of San Francisco says: "The wreck of the British bark Gifford calls attention to a subject that has been brought to the attention of the public. Plenty of tugs were on the scene of the wreck ready for service in assisting the unfortunate vessel off; hawsers were, with great difficulty, passed from tug to ship through the heavy seas, and the tugs pulled—only to break the hawsers. Again, losing no end of valuable time, the hawsers were passed to the ship, with the same result. Under worse conditions it will be tried again if the coal in the vessel can be jettisoned, and the vessel holds together so long. Had the tugs been provided with the Shaw & Spiegle Towing Machine the Gifford perhaps would still be on the shore; that no one can determine; but if she was not hauled into deep water it would not have been the fault of the tugs or the hawsers, for in all the years the towing machine has been in use a hawser has never parted that was attached to one, and much more severe tests have been given than the Gifford gave the tugging tugs." It is worth while knowing that the towing machine referred to is made by the American Ship Windlass Co. of Providence, R. I.

#### To Prevent Fires.

The Louisiana Purchase Exposition is taking every precaution to prevent the recurrence at St. Louis of any such disastrous fire as that which destroyed the great cold-storage building at the Chicago Exposition. Adequate provision is being made for water supply by putting in what is claimed will be the largest installation of fire pumps in the world. These pumps have been purchased from Henry R. Worthington, New York. They comprise twelve 1000-gallon standard Underwriter fire pumps, each capable of supplying four fire streams, making it possible to have forty-eight fire streams in use at one time. The pumps are of the duplex double-acting type, and are supplied with air and vacuum chambers of large capacity. The fittings are of composition metal throughout, and the piston and valve rods are of bronze. Every measure has been taken in designing these pumps to insure that they will start at a moment's notice at any time after having been idle for a long period. They are

final solving of the problem. Cement blocks for erecting building structures of all kinds are at present in steady demand, and the consumption increases daily at a rapid rate as engineers, architects and contractors become more fully acquainted with their merits. Being strong, fire-resistant, durable and ornamental where necessary, cement blocks are continually demonstrating their value as a modern building material. The Cement Machinery Co. of Jackson, Mich., is being especially successful in introducing its cement-making machine. This company manufactures cement-concrete construction-block machinery and devices under the Normanin patents. It is now presenting illustrative and descriptive literature regarding the equipments it offers, and which have been installed in a number of plants in different parts of the country.

#### Standard Electric Co., Norfolk.

Electrical installation for lighting and power plants, for manufactures and various other avenues of activity in which electricity is utilized, require for their completion not only efficient machinery, but also competent contractors. Ability to do this kind of work satisfactorily, even for the most exacting, is the reputation earned by the Standard Electric Co. of Norfolk, Va. This company has obtained some of the most important Southern contracts. It is now installing the arc and incandescent equipment for the Merrimac mill and village at Huntsville, Ala., and is about to begin installations for Dan River Power & Manufacturing Co., Danville, Va. This latter is one of the largest contracts, possibly the largest contract, of its kind ever awarded in the South. It includes a water-power plant of 400 horsepower, Westinghouse apparatus to be used. The work is being done for the Westinghouse Company, Lockwood, Greene & Co. of Boston being engineers and architects. The Standard Electric Co. has closed its Atlanta office and transferred James Harrison, formerly Atlanta manager, to Charlotte, N. C., vice G. H. Rutledge. Atlanta territory contracts and forces have been consolidated with Charlotte to enable better handling of work. S. B. Swift, who has had an extensive experience in electrical matters, has been promoted to be manager of the Standard Electric Co., with headquarters at Norfolk, vice former manager Alan M. Cohen. H. S. Kemp, who has had a large and varied experience in construction work, and who has been with the company from about its beginning, is superintendent of construction, located at Norfolk, Va. E. E. Vickers, district superintendent of construction, is located at Charlotte. J. M. Williams, secretary and treasurer, and founder of the company and executive officer, is also located at Norfolk. The president is James G. Penn; vice-president, R. L. Dibrell, and second vice-president, O. W. Dudley, all well-known capitalists and tobacco brokers of Danville.

#### TRADE LITERATURE.

##### Clark & Hines Calendar.

Those who use mine, mill and contractors' supplies should supply themselves with the Clark & Hines monthly calendar. This little publication serves as a most handy reference for the sizes of railroad spikes, rails, crossties, splice joints, etc. It is issued by Messrs. Clark & Hines, manufacturers' agents, 809 Equitable Building, Baltimore. They deal in the products above referred to, also in iron and steel of all kinds, wire rope, machinists' supplies, cars of all kinds, electrical supplies, etc.

##### New Link-Belt Catalogue.

The Link-Belt Engineering Co. of Nicetown, Philadelphia, Pa., is issuing a new catalogue in reference to its shallow trough belt conveyors and its coal and coke crushers. The two classes of equipment are shown in general views of complete plant installed and also in detail, so that the mechanical points can be readily appreciated. This company offers users a great variety of conveyors and elevators for handling of material, in designing and building which it has been very successful during the past twenty years.

##### Interesting Pump Facts.

The Brooklyn Engineers' Club held the first meeting of the season October 8. Besides the usual formal business, a very interesting paper, entitled "A History of Pumps, Ancient and Modern," was read by John A. Drew of the Worthington company. Mr. Drew sketched the development of pumping machines from the early Egyptian "Noria," resembling the familiar well sweep, to the latest triple-expansion condensing water-works pumping engines, requiring little more than a pound of coal per horsepower hour. The reading of the paper was

## INDUSTRIAL NEWS OF INTEREST.

### New Railroad Device.

It will probably interest railway managers and makers of railway track material to know that there has been invented a device for fastening the ends of the bars of a railroad track together without bolts. This device has been originated by a client of John A. Neese of Carnesville, Ga.

### Filter-Sand Business.

Those who may be seeking an opening to engage in business in the South are advised that an established plant is offered for sale. This property includes buildings and machinery for filter-sand business, and full particulars can be obtained by addressing P. O. Box 180, Portsmouth, Va.

### Angle Bar and Nut Lock.

Those who are concerned in railway construction and operation will be interested to know that a new angle bar and nut lock is about to be introduced. This new device is being patented by Wm. A. Young of Steele, Mo. He desires to sell the patent, and invites correspondence so that full details regarding his device can be given.

### Diamond Co. at Pittsburg.

In order to provide better facilities for selling and distributing its product, the Diamond Drill & Machine Co. of Birdsboro, Pa., has established an office in Pittsburg. This branch is located in the Farmers' Bank Building, in charge of G. B. Nutt, the Pittsburg representative of Messrs. Filling & Crane, the latter being the Diamond Company's Pittsburg agents.

### Personal.

F. D. Weeks, who has charge of the smelting department of the Engineering Company of America, has gone to Copper Cliff, Ontario. He was accompanied by Edward Everett, who goes as his assistant. The Engineering Company (New York offices at 74 Broadway) has charge of the design, plans and specifications of the new smelter which the Canadian Copper Co. is erecting at Copper Cliff.

### Has a Boston Branch.

Users of woodworking machinery in New England will be pleased to hear that the H. B. Smith Machine Co. of Smithville, N. J., has opened a branch office to pay particular attention to the trade of that section. The office is located in Boston, temporarily at No. 12 Pearl street, in charge of Elroy N. Heath, who has had an experience of some thirty years in the manufacture and sale of woodworking machinery.

### Fertilizer Plant for Sale.

Mining the phosphate deposits of Florida and manufacturing fertilizers therefrom is an important industry. At Jacksonville there is an established fertilizer plant which circumstances have placed on the market. This property is stated to be in first-class condition, and of such a character that it can be developed as a paying enterprise. W. W. Gordon, Jr., Merchants' Bank Building, Savannah, Ga., can give particulars regarding price and terms of sale.

### Modern Ammunition.

Recent tournaments in Pennsylvania have demonstrated the shooting qualities of

Illustrated by a large number of lantern slides.

#### Wire Rope and Cordage.

It is practically impossible to specify all the uses to which wire rope is adapted. Such rope is installed not only for haulage plants of all kinds, guy ropes, ships' rigging, wire tramways, cable railways and other standard equipments in use every day, but also to perform various other duties in and around factories, mills and other industrial plants and scenes of activity. The Broderick & Bascom Rope Co. of St. Louis is one of the leading manufacturers of wire rope and cordage of every description. Established in 1875 and incorporated in 1882, this enterprise has grown rapidly, until today it is one of the largest and best known of its kind in the United States. These facts are called forth by a glance at the company's price-list "E," dated July, 1903, superseding all others. If you use or think of using wire rope of any kind do not fail to send for this list. Company's offices are at 805 N. Main street. It also has branches at Seattle and New York.

#### The Nernst Lamp.

Artificial illumination is one of the necessities of life, and methods of producing it are older than history. In modern times electricity has been introduced, and the arc and incandescent lamp now plays an important part in our manner of living. The Nernst Lamp, which has been so successful since its introduction several years ago, is the subject of an interesting publication about to be issued. This publication is a textbook of the highest character, and will prove of value and interest not only to the electrical profession, but also to students of electrical science. The treatise is by A. J. Wurtz, electrical engineer, who has developed the Nernst Lamp to its present practical efficiency. It is not expected that the Nernst Lamp will supplant other illuminants to any marked degree, but that it will create for itself a field of its own. Owing to its brilliancy and economy, it will excite a demand for more light, increasing rather than decreasing the use of other illuminants. The Nernst Lamp Co. (one of the Westinghouse companies), Pittsburgh, Pa., is the manufacturer of the lamp named.

#### Checks to Dampness.

Checks to dampness are in constant demand among owners of buildings, bridges and other metal structures. Damp-resisting materials in the form of paints have proven very successful, and American manufacturers have met the demand with their accustomed thoroughness. Users of and dealers in damp-resisting paints will find interesting and valuable facts for their consideration in a brochure entitled "Endorsements on Our Check to Dampness." This publication is issued by the R. I. W. Damp Resisting Paint Co. of 472 W. Broadway, New York. It tells about the waterproof and protective qualities of the paints and coatings for different purposes manufactured by the R. I. W. company. Many prominent architects and contractors are among those who endorse the R. I. W. checks to dampness. The brochure mentioned gives all the necessary data that is required to enable the reader to understand the superior qualities of R. I. W. specialties. Messrs. Toch Bros. (established in 1846) conduct the company named. They are well known as manufacturers, importers and specialists in technical paints, colors, chemicals, raw materials, etc.

#### Mill Furnishings.

Mills for grinding and crushing corn, wheat and the various other grains are in increasing demand in all sections of the United States. Plants requiring the kind of machinery referred to are being erected and established plants are being enlarged to meet the increase in consumption of the food products which those mills manufacture. Portable mills and mill machinery made by the Munson Bros. Co. of Utica, N. Y., constitute a large part of the equipments installed. This company has for many years made a specialty of such mills, its various types having become well known wherever mills and mill furnishings are used. The company's specialties include Munson's portable mills and mill stones, Robinson mills, Little Giant water-wheels, Munson's patent eyes and spindles, shafting, gearing, pulleys and all kinds of mill furnishings. Equipments for mills of small size or of the largest size are furnished or complete plants are designed and erected ready for operation. The Munson machinery is noted for its efficiency, durability, simplicity, scientific principles and other features that appeal to millers. The Munson catalogue is now ready for distribution to inquirers. Its contents include illustrations and descriptions of the various types of machines supplied to users.

## FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

#### Review of the Baltimore Market.

Office Manufacturers' Record,

Baltimore, Md., October 14.

The Baltimore stock market during the past week was without particular movement, there being no wide variation in prices. United Railways and Seaboard, which were the most active issues, continued depressed, the common stock of the former making a new low record; Consolidated Gas also declined, and Cotton Duck and G.-B.-S. Brewing issues were dull. The investment list displayed a general lack of interest.

In the trading United Railways common dropped from 9½ to 9; the income bonds from 58½ to 58½; the 4s from 90½ to 90. Consolidated Gas went from 62½ to 60, and the 5s sold at 100½ and 110. Seaboard common declined from 12½ to 11½ rose to 12½, and then dropped again to 11½, finally reacting to 12; the preferred dropped from 21½ to 20, and while temporarily experiencing a partial reaction, fell again to the lowest point, reacting ½; the 4 per cents dropped from 68½ to 67½, reacted to 68, and then fell to 65½; the 5s sold at 101 and 101½. Cotton Duck common changed hands at 1½ to 1½; G.-B.-S. Brewing common at 8; the incomes at 31 to 30; the income scrip at 30; the 1sts at 46½ to 46½, and the scrip at 47½. Bank of Baltimore sold at 111½ and 112, and Citizens' Bank at 28; Maryland Casualty at 45.

Other securities traded in were as follows: Baltimore City 5s, 1916, 119½ and 122½; do. 3½, 1928, 110; Northern Central stock, 85 to 88; Lexington Street Railway stock, 40½; Atlantic Coast Line 1st consolidated 4s, 91½ to 90½; Georgia, Carolina & Northern 5s, 106½ and 106½; Wilmington & Weldon 5s, 116; Georgia Southern & Florida 5s, 108; Anacostia & Potomac 5s, 91½; Charleston City Railway 5s, 104½; Virginia Centuries, 92; Baltimore & Ohio stock, 72½; Lexington Street Railway 5s, 100; Atlantic Coast Line new 4s, certificates, 80; Virginia Midland 2ds, 107½; do. 5ths, 105½; Atlanta Street Railway 5s, 103.

## SECURITIES AT BALTIMORE.

#### Last Quotations for the Week Ended October 14, 1903.

	Par.	Bid.	Asked.
Georgia Sou. & Fla. 1st Pref.	100	90	98
Georgia Sou. & Fla. 2d Pref.	100	60	70
United Railways & Elec. Co.	100	80	84
Seaboard Railway Common	100	119½	121½
Seaboard Railway Preferred	100	20	20½
Atlantic Coast Line of Conn.	100	...	250
<b>Bank Stocks.</b>			
Citizens' National Bank	10	27	30
Commercial & Far. Nat. Bank	100	108	115
German Bank	100	108	...
Manufacturers' National Bk.	100	98	...
Merchants' National Bank	100	...	188
National Bank of Baltimore	100	107	115
National Exchange Bank	100	190	196
National Howard Bank	10	11½	...
National Marine Bank	10	35	37½
National Mechanics' Bank	10	29	30½
Second National Bank	100	190	195
Third National Bank	100	105	120
<b>Trust, Fidelity and Casualty Stocks.</b>			
American Bonding & Trust	50	...	86
Continental Trust	100	...	185
Fidelity & Deposit	50	...	150
International Trust	100	100	110
Maryland Casualty	25	46½	50
Maryland Trust	100	160	185
Mercantile Trust & Deposit	50	125	155
Union Trust	50	...	62
<b>Miscellaneous Stocks.</b>			
G. B. & S. Brewing Co.	100	...	14
United Elec. L. & P. Pref.	50	...	40
Cotton Duck Voting Trust	100	1	1½
Consolidation Con.	100	70	77½
George's Creek Coal	100	...	87
Consolidated Gas	100	50%	60%
<b>Railroad Bonds.</b>			
Albany & Northern 5s	...	94	95½
Atlanta & Charlotte 1st 7s, 1907	107	...	107
Atlanta Coast Line 1st 4s	...	90½	90%
Char. Col. & Aug. 2d 7s, 1910	108	...	108
Columbia & Greenville 1st 6s, 1916	110	...	116
Georgia, Car. & North. 1st 5s, 1929	106	...	107
Georgia South. & Fla. 1st 6s, 1945	106	...	108

Georgia Pacific 1st 6s	1922	118	...
Petersburg, Class A 5s	1926	106	...
Petersburg, Class B 6s	1926	120	...
Raleigh & Augusta 1st 6s	1926	120	...
Richmond & Danville Gold 6s	1915	112	114
Savannah, Fla. & West. 5s	1924	108	...
Seaboard & Roanoke 5s	1926	112½	...
Southern Railway Con. 5s	1904	111½	...
Virginia Midland 5th 5s	1926	110	...
West. North Carolina Con.	1914	112	117
West. Virginia Central 1st 6s	1911	108	110
Wilmington & Wel. Gold 5s	1935	115	116
Charleston City Railway 5s	1923	104½	106
Newport News & Old Pt. 5s	1928	105	...
Norfolk Street Railway 5s	1944	108	...
United Railways 1st 4s	1940	90	90½
United Railways Inc. 4s	1949	58½	58½
Seaboard 4s	...	66	...
Seaboard 10-year 5s	...	100½	...
Georgia & Alabama Con. 5s	...	103½	...
South Bound 5s	...	105½	...

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and bonds and miscellaneous stocks and bonds. As a basis for the work the official insurance reports of the different States were used wherever practicable, and when such reports did not present definite descriptions of securities, application was made direct to the companies for such data. It is a book which will be valuable to bankers and brokers, as well as to other business men who have to deal with stocks and bonds. It is to be issued every year, and changes and additions are to be made accordingly.

#### South Carolina Bankers.

The South Carolina Bankers' Association, which held its annual convention at Columbia, elected officers for the year as follows: President, E. Robertson of Columbia; vice-president, B. T. Mauldin of Anderson; secretary and treasurer, Joseph Norwood of Greenville. Among the speakers at the convention were Governor D. C. Heyward, A. C. Haskell, vice-president of the National Loan and Exchange Bank of Columbia; Mayor F. Sumter Earle, President E. H. Pringle of the Bankers' Association, W. D. Morgan of Georgetown and others. The convention lasted two days, and concluded with a banquet.

#### New Corporations.

The First National Bank of Yorktown, Texas, capital \$25,000, has been authorized to begin business; William Eckhardt, president; Charles J. Eckhardt, cashier.

[For Additional Financial News, See Pages 30 and 31.]

**Hambleton & Co.****BANKERS and BROKERS,**

Members New York and Baltimore Stock Exchanges.

17 S. Calvert St., BALTIMORE.

High-grade Investment Bonds, Municipal, Railway, Industrial.

Letters of Credit Available Everywhere.

**CONDENSED STATEMENT OF THE First National Bank of Richmond, Va.**

SEPT. 9, 1908.

**RESOURCES.**

Loans and Discounts	\$4,677,890.94
Overdrafts	142.54
Other Stocks and Bonds	17,891.78
Banking House and other Real Estate	67,510.14
Furniture and Fixtures	0.00
U. S. Post Office Bonds at par (Market Value \$67,025.00.)	612,500.00
Premium on U. S. Bonds	0.00
Virginia Bonds to Secure U. S. Deposits	386,000.00
Cash and Due from Banks	1,408,812.35
	<b>\$6,580,457.75</b>
<b>LIABILITIES.</b>	
Capital	\$600,000.00
Surplus and Profits, net	515,742.23
Reserved for Interest	9,096.01
Circulation	500,000.00
Deposits	4,447,219.81
U. S. Bond Account	12,500.00
Virginia Bond Account	386,000.00
	<b>\$6,580,457.75</b>

VIRGINIUS NEWTON, PRES. JNO. M. MILLER, JR., Cash.

**C. N. McADOO & CO.**

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It is reported that a bank is being organized at Morven, N. C., with \$12,000 to \$15,000 capital.

The Pikeville Building Association & Loan Co. has been organized at Pikeville, Ky.; capital \$75,000.

The Bank of Arcadia has been authorized to begin business at Arcadia, Oklahoma; capital \$5000.

The People's Savings Bank of Brownsville, Tenn., has organized by electing John Y. Barbee as president and J. W. Byrn as cashier.

The First National Bank of Calvin, I. T., has been authorized to begin business; capital \$25,000; George A. Seales, president; Fred C. Russel, cashier.

The Pearsall National Bank of Pearsall, Texas, has been authorized to begin business; capital \$50,000; C. H. Beever, president; J. M. Riggan, cashier.

The Virginia Trust and Saving Corporation of Alexandria, Va., capital from \$10,000 to \$100,000, has been incorporated; president, L. G. Smith of Philadelphia.

The Georgia Insurance & Brokerage Co. of Atlanta, Ga., capital \$100,000, has applied for a charter. The organizers are A. S. Doughty, Ed C. Bruce and J. B. Felder.

The First National Bank of Prague, O. T., has been approved; capital \$25,000. The organizers are George R. Sutton, H. Josey, J. H. Ayers, E. L. Conklin and P. S. Hoffman.

The Ella Banking Co. of Charleston, W. Va., capital \$40,000, has been incorporated by D. C. Boyce, H. B. Smith, Walter D. Stockley, A. J. Humphreys and G. W. Fulmar.

The Hancock County Bank of Sneedville, Tenn., capital \$25,000, has been chartered by M. T. Festerman, William B. Davis, T. J. Harrison, D. A. Greene and W. H. Tyler.

The Reliance Building and Loan Association of Charleston, S. C., capital \$150,000, has received its commission. The directors are M. F. Kennedy, R. E. Martin and F. M. Anderson.

The Elk Banking Co. of Charleston, W. Va., capital \$40,000, has been incorporated by D. C. Boyce, H. B. Smith, Walter D. Stockley, A. J. Humphreys and G. W. Fulmar of Charleston.

The First National Bank of Smithville, Texas, capital \$25,000, has been approved. The organizers are W. R. Searcy, Roger Byrne, J. P. H. Chancellor, D. Payne and A. B. Mayfield.

The Commercial National Bank of Burket, Texas, capital \$25,000, has organized by electing Otto S. Houston, president; F. P. Green and Early Moses, vice-presidents, and C. W. Howard, cashier.

The Melton's Bank of Gassaway, Cannon county, Tennessee, capital \$12,000, has been incorporated by G. G. Melton, J. B. Melton, J. H. Melton, J. W. Sader, A. J. Smith and J. B. Smithson.

The Bank of Jonesboro at Jonesboro, Ga., has received its charter; capital \$25,000. The incorporators are A. C. Blalock, L. H. Hammatt, Jesse W. Mundy and A. A. Camp, all of Jones county.

The First National Bank of Floydada, Texas, capital \$30,000, is approved. Those interested are L. T. Lester, Canyon, Texas; James B. Posey, Will W. Nelson, C. Surginer, John N. Farris.

The Citizens' National Bank of Calvin, I. T., has been approved; capital \$25,000. The organizers are M. B. Donogh of Alton, I. T.; M. P. Donogh, C. C. Atwood, Lafayette Walker and W. L. Chapman.

The Bank of Dexter at Dublin, Ga., capital \$15,000, has elected directors as follows: Dr. James E. New, president; J. E. Lord, W. H. Lee, W. H. Mullis, W. A. Shank, R. C. Hogan and W. B. Taylor.

The Bank of Wilson at Wilson, La.,

capital \$10,000, has organized and will apply for a charter. The officers are E. S. Hastings, president; R. E. Thompson, vice-president; J. C. McGlather, cashier.

The Collins Building and Loan Association of Collins, Miss., has published its charter; capital \$50,000. The incorporators are Wm. Rutledge, J. F. Rutledge, W. C. Wood, W. E. Payne and McIntosh Bros.

The Texas National Bank of Dallas, Texas, capital \$250,000, has been approved. The organizers are J. W. Blake, Dallas, Texas; A. C. Wilson, S. G. Davis, D. E. Grove, A. P. Wozencraft and others.

The Hickory Banking & Trust Co. is reported being organized at Hickory, N. C., with \$35,000 capital and officers as follows: J. F. Abernathy, president; Geo. Hutton, vice-president, and W. C. Kinnon, cashier.

The Citizens' Savings Bank is reported in process of organization at Birmingham, Ala., by B. F. Roden, J. B. Cobbs, H. H. Mayberry and others; capital \$100,000. It is expected to begin business before November 1.

The Citizens' National Bank of Blooming Grove, Texas, has been approved; capital \$25,000. R. S. Loyd, Blooming Grove, Texas; James Garity, M. G. Young, B. F. Hartzell and J. H. Watson are the organizers.

The First National Bank of Chester, W. Va., which is a conversion of the Industrial Bank of West Virginia, has been authorized to begin business; capital \$50,000. John A. Campbell is president, and Oscar O. Allison, cashier.

The Citizens' National Bank of Garland, Texas, has been authorized to begin business; capital \$50,000. The organizers are Ben O. Smith, Fort Worth, Texas; B. H. Martin, Francis P. Smith, T. N. Hickman and Alice P. Hickman.

The Texas Loan & Reserve Co. of Grand Prairie, Dallas county, Texas, capital \$100,000, has filed its charter. The incorporators are G. W. Owens, Oak Cliff; W. R. Edrington, H. C. Edrington and R. G. Johnson of Fort Worth.

The Commercial National Bank of Oklahoma City, O. T., has been authorized to begin business; capital \$100,000. The officers are: President, John Threadgill; vice-president, C. F. Colcord; cashier, John Hughes; assistant cashier, E. C. Trueblood.

A national bank is being organized at Northeast, Md.; capital \$25,000. The directors are L. L. Erickson, president; Charles A. Benjamin, vice-president; Andrew Anderson, E. T. B. Day, John Moore and Dr. R. G. Underwood; Robert L. Morgan, cashier; capital \$25,000.

The Volunteer State Life Insurance Co. has established temporary headquarters at Chattanooga, Tenn., and is preparing to begin business; capital \$200,000, surplus \$50,000. The officers are: President, Z. C. Patten; vice-president and general manager, E. B. Craig; superintendent of agencies, Theo. F. King; secretary, Albert Caldwell.

The Farmers' Mutual Insurance Association of Williamson county, Texas, with headquarters at Georgetown, has been incorporated by R. A. Bradford of Taylor, Frank L. Aten of Round Rock, J. H. Tom and S. M. Morris of Georgetown, J.

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C. McBride of Leander, J. C. Lamb of Granger, D. D. Thompson of Florence and J. B. Salyer of Jonah.

The Bank of Newborn, Newton county, Georgia, has received its charter; capital \$25,000. The incorporators are C. A. Banks, N. P. Smith, J. M. Loyd, J. T. Pitts, R. A. Pitts, Guy Smith, J. T. Wilson, J. O. Stanton, Dr. J. L. Pharr, C. T. Williams, W. W. Childs of Newton county, W. P. Wallace, F. R. Porter, E. M. McCash of Morgan county and L. O. Benton of Jasper county.

#### New Securities.

Bay City, Texas.—The city has issued \$15,000 of 5 per cent. bonds for streets and bridges.

Austin, Texas.—The State board of education has purchased \$25,000 of Lavaca county bridge bonds.

Kaufman, Texas.—The city of Kaufman has issued \$5000 of 4½ per cent. supplementary water-works bonds.

Yorktown, Texas.—The city has issued 4 per cent. bonds as follows: \$25,000 for bridges and \$7500 for water-works.

Newport News, Va.—The finance committee of city council will recommend the issue of \$56,000 of 4½ per cent. paving bonds.

Beaumont, Texas.—The Jefferson county commissioners have authorized the sale of \$100,000 of 6 per cent. 20-40 road bonds.

Tullahoma, Tenn.—N. W. Harris & Co. of Chicago have purchased \$5000 of Tullahoma water-works bonds for par and interest.

Hartselle, Ala.—The Morgan county commissioners have ordered an election on November 16 to vote on \$160,000 of road bonds.

Burlington, N. C.—Alamance county has sold to C. A. Webb & Co. of Asheville, N. C., \$50,000 of 5 per cent. 30-year bonds at a premium of \$1350.

Whitecastle, La.—The town council has decided to sell \$10,000 of 5 per cent. 10-year water-works bonds, bids to be received until December 31.

Louisville, Ky.—The city has sold \$200,000 of the new bonds to the Germania Bank and the Fidelity Trust Co. at par. There are \$600,000 yet unsold.

Palestine, Texas.—The International & Great Northern Railroad has been granted permission to issue \$94,000 of bonds on the last four miles of the Madisonville branch.

Port Gibson, Miss.—Bids will be received until November 2 for \$20,000 of 5 per cent. bonds of Claiborne county. C. B. Dochterman is county treasurer, who may be addressed.

Sandersville, Ga.—F. F. Stacer of Sandersville has purchased the balance of \$22,000 of city electric-light and water-works bonds at a premium of \$2.50. The total issue is \$38,000.

Washington, Ga.—Bids will be received until noon on Wednesday, November 4, for \$40,000 of 4 per cent. courthouse bonds issued by Wilkes county. W. M. Sims may be addressed.

Clinton, Tenn.—The court has approved the issue of \$100,000 of good-roads bonds as voted. The road commissioners are T. A. Johnson, chairman; Wm. Owens, secretary, and A. K. Brooks.

Anderson, S. C.—The city of Anderson has voted \$50,000 of bonds to aid the Tennessee, Georgia & South Carolina Railroad. They are conditional upon the road's being in operation within two years.

#### Financial Notes.

The Belton Loan & Investment Co. of Belton, S. C., has increased its capital to \$20,000. W. K. Stringer is president.

There are 247 State banks and 70 na-

tional banks in Oklahoma, according to the quarterly statement of the bank commissioner.

#### Niagara Falls Excursion—Last Low-Rate Vacation Trip via Pennsylvania Railroad for the Season.

On October 16 the Pennsylvania Railroad Co. will run the last popular 10-day excursion to Niagara Falls from Baltimore for the present season. On this date the special train will leave Baltimore 9:05 A. M., York 10:45 A. M., arriving Niagara Falls at 9:45 P. M.

Excursion tickets, good for return passage on any regular train, exclusive of limited express trains, within ten days, will be sold at \$10 from Baltimore, \$9.35 from York, and at proportionate rates from principal points. A stop-over will be allowed at Buffalo within limit of ticket returning.

A special train of Pullman parlor cars and day coaches will be run through to Niagara Falls. An extra charge will be made for parlor-car seats.

An experienced tourist agent and chaperon will accompany the party.

For descriptive pamphlet, time of connecting trains and further information apply to nearest ticket agent, or address Geo. W. Boyd, general passenger agent, Broad Street Station, Philadelphia. †

#### Tour to the Pacific Coast via Pennsylvania Railroad, Account Meeting National Bankers' Association.

On account of the meeting of the National Bankers' Association, to be held at San Francisco, Cal., October 20 to 23, the Pennsylvania Railroad Co. offers a personally-conducted tour to the Pacific coast at remarkably low rates.

This tour will leave New York, Philadelphia, Baltimore, Washington and other points on the Pennsylvania Railroad east of Pittsburgh, Wednesday, October 14, by special train of the highest grade Pullman equipment. A quick run westward to San Francisco will be made via Chicago, Omaha, Cheyenne and Ogden.

Five days will be devoted to San Francisco. Returning, the special train will run to Los Angeles, where two days will be spent among the resorts of Southern California. Santa Barbara, Del Monte, Salt Lake City, Colorado Springs, Denver and St. Louis will be visited on the journey eastward. The party will reach New York on the evening of November 4.

Round-trip rate, covering all expenses for eighteen days, except five days spent in San Francisco, \$190.

Rates from Pittsburgh will be \$5 less.

For full information apply to ticket agents, or Geo. W. Boyd, general passenger agent, Broad Street Station, Philadelphia, Pa. †

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Ads. marked \* appear every other week. Ads. marked † appear in first issue of the month. Ads. marked ‡ not in this issue.

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American Supply Co. ....	51	Cardwell Machine Co. ....	51	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Steele, J. C., & Sons. ....	44			
American Tin Plate Co. ....	46	Carey, George H. ....	38	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Stetson Lumber Co. ....	53			
American Railway Supply Co. ....	4	Caldwell, H. W., & Son Co. ....	4	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Stevens, H., Sons Co. ....	60			
American Roofing Co. ....	47	Caldwell, W. E., Co. ....	31	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Stewart, John A., Electric Co. ....	36			
American Sheet Steel Co. ....	28	Cameron & Barkley Co. ....	35	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Stieff, Charles M. ....	56			
American Ship Windlass Co. ....	2	Campbell & Glute Machine Co. ....	1	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Stilwell-Biers & Smith-Vaile Co. ....	18			
American Spiral Pipe Works. ....	53	Capilar Co., The. ....	20	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Stimson, E. B., & Son. ....	44			
American Steam Gauge & Valve Mfg. Co. ....	29	Capital Gas Engine Co. ....	17	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Stirling Co. ....	18			
American Steam Pump Co. ....	54	Carver Cotton Gin Co. ....	26	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	St. Louis & San Francisco R. R. ....	57			
American Supply Co. ....	51	Carey Spring Works. ....	24	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	St. Louis Portland Cement Co. ....	5			
American Type Founders Co. ....	46	Casey, D. L., Machine Co. ....	36	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Stockier, George J. ....	23			
Andrews & Johnson Co. ....	39	Castner, Curran & Bulitt. ....	48	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Stowell, M. G. ....	47			
Andrews, Perry & Bro. ....	54	Catlett, Charles. ....	6	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Strait, H. N., Mfg. Co. ....	18			
Appraisal & Audit Co. of Amer. ....	30	Chase Puller Co. ....	28	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Stratton & Bragg Co. ....	48			
Arctic Machine Co. ....	*	Chattanooga Paint Co. ....	49	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Strauss Machinery Co. ....	*			
Armitage Mfg. Co. ....	35, 47	Chattanooga Roof & Fdry Co. ....	7	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Stringfellow & Webster Co. ....	31			
Armstrong, R. S., & Bro. ....	37	Chesapeake Iron Works. ....	44	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Stuebner, G. L., Iron Works. ....	40			
Asphalt Ready Roofing Co. ....	46	Chesapeake Steamship Co. ....	56	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Sturtevant, E. B., Co. ....	39			
Athen Chamber of Commerce. ....	56	Chicago Housewrecking Co. ....	1	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Sturtevant Mill Co. ....	42			
Atherton Machine Co., A. T. ....	1	Chilcott-Evans Chain Co. ....	60	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Sullivan Machinery Co. ....	45			
Atlas Engine Works. ....	17	Cin'nat'i Exhaust & Blow Pipe Co. ....	39	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Sutherland, Howard. ....	57			
Audie, Theo., & Co. ....	56	Cincinnati Milling Machine Co. ....	1	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	T				
Audit Co. of New York. ....	56	Clark, Clarence E. ....	34	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Tallarday Steel Pipe & Tank Co. ....	55			
Aultman Co., The. ....	41	Clark & Hines. ....	37	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Taylor Iron & Steel Co. ....	42			
Austin Mfg. Co. ....	43	Clayton. ....	35	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Thew Auto Shovel Co. ....	42			
B	Babcock & Wilcox Co. ....	19	Cleveland Belting & Mch. Co. ....	35	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Thompson, Son & Co. ....	31		
Bacon Air Lift Co. ....	54	Clyde Machine Works. ....	38	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Thomson, Henry W. ....	29			
Badger, E. B., & Sons Co. ....	1	Cook, E. J. Co. ....	36	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Titus, E. E. ....	49			
Badger Fire Extinguisher Co. ....	51	Coe Mfg. Co. ....	49	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Tobey & Kirk. ....	39			
Baeder, Adamson & Co. ....	53	Cohen-Schwarts Ball & Steel Co. ....	37	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Tod, William, Co. ....	16			
Bailey-Lebby Co. ....	10	Cohoes Iron Foundry & Mch. Co. ....	10	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Toomey, Frank. ....	37			
Bailey, John T., & Co. ....	9	Collier & Brown. ....	6	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Traford, E. W. ....	33			
Baird, Machinery Co. ....	10	Columbia Refining Co. ....	47	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Trask, J. F. & Co. ....	29			
Baker, H. C., & Co. ....	36	Columbia Supply Co. ....	28	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Treasury Department. ....	31			
Baker, Stillwell & Hart. ....	36	Columbian Cordage Co. ....	60	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Trenton Iron Co. ....	44			
Baldwin Locomotive Works. ....	13	Columbus Iron & Steel Co. ....	36	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Triumph Electric Co. ....	59			
Ball Engine Co. ....	31	Columbus Iron Works Co. ....	22	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Tupele Tank Co. ....	24			
Ball & Wood Co. ....	*	Columbus Machine Co. ....	17	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	U				
Baltimore Belting Co. ....	25	Commercial Electric Co. ....	59	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Underwood, H. B., & Co. ....	13			
Baltimore Engine Co. ....	17	Consolidated Air Lift Co. ....	60	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Union Brick Bond Co. ....	45			
Baltimore Fire Warehouse Co. ....	30	Continental Iron & Steel Co. ....	37	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Union Iron Works Co. ....	16			
Baltimore-Maryland Engrav. Co. ....	37	Continental Trust Co. ....	36	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Union Rail Co. ....	33			
Balt. Shipbldg. & Dry Dock Co. ....	60	Contractors' Equipment Co. ....	36	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Union Iron Works Co. ....	22			
Baltimore Steam Packet Co. ....	56	Contractors' Plant Mfg. Co., Ltd. ....	21	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	University School for Boys. ....	35			
Barnes, W. F., & John, Co. ....	11	Contractors' Supply & Equip. Co. ....	35	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	U. S. Cast Iron Pipe & Fwy. Co. ....	29			
Barnett, G. H., Co. ....	40	Cook's Adam, Sons. ....	21	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	U. S. Mineral Wool Co. ....	49			
Barr & Elam. ....	6	Cook Well Co. ....	54	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	U. S. Mortgage & Trust Co. ....	31			
Barr, H. G. ....	10	Barrett Mfg. Co. ....	23	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	V				
Bartlett, C. O., & Snow Co. ....	*	Cornicane Gas & Electric Co. ....	37	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Valk & Murdoch Iron Works. ....	19			
Bates' James, Sons. ....	40	Cortright Metal Roofing Co. ....	47	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Vanderbilt, E. W. ....	11			
Bates Machine Co. ....	18	Cotton Oil & Fibre Co. ....	25	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Vanduzen Co., E. W. ....	11			
Beach, H. W. ....	48	Cotton States Belt & Supply Co. ....	10	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Van Noorden, E. Co. ....	47			
Beckley, A. J., Co. ....	44	Cox, Justice, Jr., & Co., Ltd. ....	38	Kirkendall & Lippert Co. ....	57	International Trust Co. ....	29	Van Winkle, E. G., Mch. Wks. ....	31			
Belmont Iron Works. ....	45	Creamery Package Mfg. Co. ....	22	Kirkendall								

## PROPOSALS.

TREASURY DEPARTMENT, office of the Supervising Architect, Washington, D. C., September 30, 1903.—Sealed Proposals will be received at this office until 3 o'clock P. M. on the 9th day of November, 1903, and then opened, for the construction (except heating apparatus, electric wiring and conduits) of the extension to the U. S. Post Office and Court House at Kansas City, Missouri, in accordance with the drawings and specification, copies of which may be had at this office or at the office of the Custodian at Kansas City, Mo., at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect.

ADVERTISEMENT FOR SEALED BIDS.—It is ordered that the Clerk of the Board of Supervisors be and he is hereby directed to advertise for sealed proposals for repairing the Court House, according to plans and specifications now on file in his office. The repairs consisting of underpinning and putting a new foundation around three sides of said building. It is further ordered that the advertisement be inserted in the Manufacturers' Record, a journal published in Baltimore, Md. By order of the board, this October 7th, 1903. According to the above, I will receive bids until 9 o'clock on Monday morning, November the 2d, 1903.

Macon, Miss. Z. T. DORROH, Clerk.

## NOTICE.

Notice is hereby given that the contract for the building of a new Court House in the City of Wickliffe, Ballard County, Kentucky, will be let at public outcry at the Court House door in the City of Wickliffe, on Saturday the 31st day of October, 1903; said house to be constructed in accordance with the plans and specifications adopted and now in the custody of the County Court Clerk of Ballard County. \$2500 over and above the salvage of the old building has been set apart for the building of said house. Said work to begin within 30 days after contract is closed, or as soon as practicable.

W. M. POWELL,  
W. J. HAGOOD,  
HENRY WATWOOD, Committee.

## Notice to Contractors.

BIDS will be received until 12 M. November 2nd, 1903, for the erection, and entire completion of a Market House Building, by the city of Monroe, Louisiana, according to plans and specifications prepared by L. M. Weathers, Architect of Memphis, Tennessee, which can be had from J. M. Beard, Chairman Public Building Committee, Monroe, Louisiana, and also at the office of L. M. Weathers, Architect, room 25, Cotton Exchange Building, Memphis, Tennessee. Each bid must be accompanied by certified NATIONAL BANK check of five hundred dollars. (\$500) payable to A. J. Renaud, Treasurer of the city of Monroe, Louisiana, checks to be held by said city for ten days in order to give successful contractor time to qualify, the check of successful contractor to be retained by the city until contract is signed with him, and bond has been given by him, and accepted by said city. The contractor must give satisfactory surety bond for fifty per cent. of the amount of the contract within ten days after contract is signed.

Should the contractor fail to make such bond, his check will be forfeited to the said city. The city reserves the right to reject any or all bids, or to accept any bid submitted, which may be found to be the best bid. Contractors will state time that they will require to complete the said Market House Building. Each bid shall be marked "Proposal for Market House Building," and addressed to J. M. Beard, Chairman Public Building Committee, Monroe, Louisiana.

## Notice to Contractors.

For the furnishing of labor and materials for the erection of a new Courthouse and Jail, in accordance with the plans and specifications now on file in the Probate Judge's Office at Dothan, Ala., and prepared by Andrew J. Bryan & Co., Architects, of New Orleans, La., 204 Hennen Building, and under their supervision, the Board of County Commissioners of Houston County, Alabama, will receive bids up to 12 o'clock noon, Monday, November 2, 1903, at which time the same will be opened. All bids must be addressed to the "HON. GEORGE LESLIE," Probate Judge, and marked "COURTHOUSE PROPOSALS;" the same must be in his hands on or before 12 o'clock of the above day, or they will not be received.

Each bidder must submit with his proposal for the Courthouse a certified check in the amount of Twenty-five Hundred (\$2500) Dollars, and also a certified check with his proposal for the Jail in the amount of One Thousand (\$1000) Dollars, as a guarantee of good faith that he will, if his bid should be accepted, make and execute a Surety Company Bond satisfactory to the Board, in the amount of the Contract Price for each building. In failure so to do, in either case, the check so submitted will be forfeited to the County as damage.

The two buildings will be constructed of such materials as are set forth in the plans and specifications. Concrete footings, hard-burned brick laid in cement in foundations. The exterior will be press brick and stone; the roof covered with slate, and the floors to be fireproof construction. Ceilings to be stamped steel.

Payments to be made in cash. For information pertaining to the general financial conditions of the County, confer with Hon. George Leslie, Probate Judge. For information pertaining to plans and specifications, confer with the architects. All persons desiring to bid on the above work can secure plans and specifications upon application to the architects, together with proposal sheets. The Board of County Commissioners reserves the right to accept any or reject all bids.

NOTICE OF SALE OF BONDS.—The undersigned, treasurer of Claiborne County, Mississippi, will from this date until the 2nd day of November 1903, receive sealed bids for the \$20,000.00 5% bonds of Claiborne County, Mississippi, provided for at the October, 1903, meeting of the Board of Supervisors of said County, at Port Gibson. Said bids will be opened on said 2nd day of November, and will be sold to the highest bidder. No bid less than par will be considered. A certified check for \$500.00 must be deposited with each bid. C. B. DOCHTERMAN, County Treasurer.

GALVESTON, TEXAS, Oct. 7, 1903.—SEALED PROPOSALS, in duplicate, for grade raising at Galveston, Texas, involving over 11,000,000 cubic yards of filling, will be received by the Chairman of the Grade Raising Board, until 2 P. M., December 7, 1903, and then publicly opened. For information apply to E. R. CHEESEBOROUGH, Secretary Grade Raising Board, Galveston, Texas.

C. S. RICHE, Consulting Engineer.

THE PAGE COAL & COKE COMPANY, Elkhorn, W. Va., will receive bids for one hundred (100) coke ovens, up to the yard level; also foundations and walls for tipple at operation on Belcher Branch of Tug River. Plans may be examined at their office at Elkhorn, W. Va.

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Consulting Electrical Engineer,  
(Member Am. Inst. Elect. Engrs.)

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A small groove in angle bar and offset one-eighth inch at one end of bar and inch long. The key will lock itself and a head on other end, and if bolts become loose key can be drawn and bolts tightened and put back without damage to key. It is the best device for nut locks out. Railroad men say it beats anything they have ever seen for a nut lock—such as section foremen, roadmasters, superintendents, conductors, engineers. It is valuable for car building, and also for machinery where there is more than one nut. Model furnished free to buyer. Patent serial No. 158,997 will bear date of October 6, 1903. Address all bids to

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## Creamery Outfit,

For Bottling Works Outfit.

PULASKI ICE & PACKING CO.

PULASKI, TENN.

So Says Secretary Wilcox  
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CUBAN LEAF Filler and Wrapper can be  
grown in East Texas on line of  
The SOUTHERN PACIFIC  
Soils and Climate similar to famous Vuelta Abajo District of  
Pinar del Rio, Cuba.

T. J. ANDERSON, General Passenger Agent.

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## The Schwarz-System Brick Company,

### SAND-LIME BRICK ENGINEERS.

Factories Built by Us are Built Right  
and Run Right.

Chemicals Are Not Necessary to  
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No. 72 14"x15' Lodge & Shipley.  
 No. 73 14"x15' Lodge & Shipley.  
 No. 49 30"x10' Taper, Lodge & Shipley.  
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THE LODGE & SHIPLEY  
MACHINE TOOL CO.

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Central station man's opportunity to increase the day load. We offer for immediate delivery, all f. o. b. Cincinnati, the following 125 cycle fans:

150 G. E. swivel and trun., 12 in., 104 volt., \$5.00 each.  
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 100 G. E. swivel and trun., 12 in., 52 volt., \$4.00 each.

JOHN A. STEWART ELECTRIC CO.  
430 Sycamore St., Cincinnati, Ohio.

### CONTENTS OF A MACHINE SHOP FOR SALE.

16x6 Davis & Egan engine lathe, comp. rest. 18"x8" Hendey-Norton engine lathe, comp. rest. 21"x10" Lathe & Morse engine lathe, plain rest. 22x16x8" Phoenix planer. 15" Hendey Shaper. 24" Hendey shaper. 30" Prentiss Broa. drill press, back geared, power feed. 70" Gang radial drill. 62" Hillis & Jones radial drill. No. 16 Garvin plain-milling machine with vertical spindle attach. No. 21/2 Garvin Universal milling machine. No. 1 Pratt & Whitney screw machine, wire feed. No. 2 Garvin screw machine, plain head. No. 3 Pratt & Whitney screw machine, geared friction head. No. 4 Warner & Swasey screw machine, friction head, wire feed, collets and tools. 27"x12" Garvin screw machine and tools. 1" automatic screw machine. Pratt & Whitney. 2" automatic screw machine. Pratt & Whitney. No. 1 Diamond universal grinder. 24" Colburn boring and turning mill, with chuck. No. 4 diamond face grinding machine. Underwood portable milling machine. Photo and description on application.

THE GARVIN MACHINE CO.  
Spring and Varick Sts., New York.

### FOR SALE.

1 20x36x48 Cross Compound Corliss. .... \$3250  
 1 18x42 Harris Corliss, overhauled. .... 1100  
 1 14x48 Corliss. .... 600  
 1 20x60 Corliss, first-class. .... 1000  
 1 500 H. P. Berryman Heater. .... 150  
 1 400 H. P. Knowles Comp. Jet Condenser. .... 250  
 STEAM PUMPS, HEATERS, TRAPS.  
 100' 1" Pipe in three coils, 1/2 net price new.  
 4 36" Davidson Vent. Fans. .... 25 each  
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 1 MORSE WILLIAMS ELEVATOR. .... \$125  
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1 22x52 R. H. Watts Campbell Corliss Engine.  
 1 10x12 Ideal Automatic Engine.  
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 1 15 ton Road Roller for sale or rent.  
 1 Little Giant Steam Shovel.  
 1 10x7x10 Worthington Duplex Pump.  
 Iron Tanks, 300 to 1000 gallon capacity.

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1-54 in. x 12 ft. horizontal tubular boiler.  
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 6 steam pumps—all sizes.

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Two Pairs 16x20 Link Motion Engines.  
 Can be used for Hoisting Purposes.

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12"x15' Pratt & Whitney, rise and fall rest, with taper.  
 14"x16" Putnam, rise and fall rest.  
 14"x16" Prentiss, rise and fall rest.  
 14"x16" Blaisdell, rise and fall rest, with taper.  
 15"x16" Peeter, rise and fall rest.  
 16"x16" Prentiss, rise and fall rest, with taper.  
 16"x16" Pratt & Whitney, rise and fall rest, with taper.  
 18"x16" M. B. & C., plain rest.  
 18"x16" Fay & Scott, compound rest.  
 18" Reed, plain.  
 18"x16" Lodge & Davis, compound rest and taper.  
 24"x16" No Name, incomplete.  
 26"x16" Betts Lathe, compound rest.  
 20"x16" Stark, plain.  
 26"x14" Betts Lathe, compound rest.  
 No. 3 B. & O. Turret.  
 No. 14 Garvin Special Forming Turret Lathe.  
 14"x16" Lodge & Barker Turret Lathe.  
 18"x16" Johnson Turret Lathe.  
 18"x16" Lodge & Davis Chucking Lathe.  
 Six-Spindle Miles, Bement & Co. Arch Bar Drill.  
 28" Bickford Upright Drill.  
 20" Barnes Upright Drill.  
 Three-Spindle Upright Slatte Sensitive Drill.  
 Three-Spindle Garvin Sensitive Drill.  
 12"x16" 8" Sellers Planer, one head.  
 42"x42"x10' Whitcomb Planer, two heads.  
 42"x42"x10' Betts Planer, one head.  
 18" Smith & Mills Shaper.  
 No. 2 Keyset Milling Machine.  
 No. 2 Garvin Plain Milling Machine.  
 No. 1 B. & S. Universal Milling Machine.  
 No. 44 Garvin Plain Mill.  
 No. 3 Garvin Plain Mill.  
 No. 2 Garvin Plain Mill.  
 1 No. 44 Brainard Plain Mill.  
 1 No. 4 Schenckers Double-Head Bolt Cutter.  
 12" Pratt & Whitney Cutting-Off Machine.  
 12" Lowell Machine Co.'s Slotter.  
 Double-Head Pratt & Whitney Horizontal Boring Mill.  
 Cold Saw, 18" Blade, Pump and Pan.  
 20" Springfield Knife Grinder.  
 Wells Bros. Cutter and Reamer Grinder.  
 Springfield Tool Grinder, 36" Wheel, with pump.  
 2 Speed Lathe.  
 4 36 H. P. Portable Boilers.  
 1 Blacksmith Bellows.  
 Also a complete line of new machines. Correspondence solicited.

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### 2ND-HAND TOOLS.

**Lathes.**  
 18 in. x 6 ft. Fisfield.  
 26 in.-38 in. x 18 ft. Fitchburg, blocks.  
 27 x 14 Geo. Price, heavy.  
 28 x 12 ft. Fay & Scott.  
 17 Stewart Speed Lathes.  
 18 in. x 8 ft., comp. rest, Lowell.  
 Axle Lathes, Bement (2).  
**Planers.**  
 24 in. x 4 ft. heavy, Leeds.  
 26 in. x 6 ft. L. W. Pond.  
 48 in. x 42 in. x 18 ft. Sellers, 2 heads.  
**Shapers.**  
 16 in. Geared, Western.  
 18 in. Ohio, crank.  
 32 in. Prentiss-Juengst.  
**Drills.**  
 Ceiling, 3 ft. arm, Radial, Ceiling, Boilmakers.  
**Screw Machs.**  
 No. 60 Garvin, 1/2 in., with wire feed.  
 Garvin Hub Mch., 4 1/2 in., hole.  
 1/4 in. Wh. ton Gear Cutter.

Write your requirements.

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7 1/2 H. P. Genl. Elec. Motor, 220 volts, fine condition.  
 30 H. P. Chandler & Taylor automatic engine, fine condition.  
 26 H. P. Westinghouse vertical engine, fine condition.  
 8" x 10" Valley automatic engine, New. 2, 5 and 7 1/2 H. P. New Olin gas and gasoline engines, etc.

**LARGE LOT WOOD WORKING  
MACHINERY, IRON WORKING  
MACHINERY & STEAM PUMPS.**  
Horizontal and Vertical Boilers, All Sizes.

Large lot good second-hand leather belting, machinery tools and supplies for every branch of the mechanical trades.

**WHAT HAVE YOU FOR SALE?**  
All kinds of machinery, engines, boilers, steam pumps, bought or exchanged.  
Send for Machinery List No. 8

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We have FOR SALE at

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1 Smoke Stack, 8' diameter, 130' high, self supporting.  
 3 Hartman Stoves, complete, 66"x16".  
 1 Hartman Stoves complete, 46"x15".  
 1 9"x15" Farrell Stone Crusher.  
 16 Cylinder Boilers, 36"x41".  
 Air Tanks and Receivers from blowing engine.

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12"x15' Pratt & Whitney, rise and fall rest, with taper.  
 14"x16" Putnam, rise and fall rest.  
 14"x16" Prentiss, rise and fall rest.  
 14"x16" Blaisdell, rise and fall rest, with taper.  
 15"x16" Peeter, rise and fall rest.  
 16"x16" Prentiss, rise and fall rest, with taper.  
 18"x16" M. B. & C., plain rest.  
 18"x16" Fay & Scott, compound rest.  
 18" Reed, plain.  
 18"x16" Lodge & Davis, compound rest and taper.

24"x16" No Name, incomplete.

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20"x16" Stark, plain.

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18" Smith & Mills Shaper.

No. 2 Keyset Milling Machine.

No. 2 Garvin Plain Milling Machine.

No. 1 B. & S. Universal Milling Machine.

No. 44 Garvin Plain Mill.

No. 3 Garvin Plain Mill.

No. 2 Garvin Plain Mill.

1 No. 44 Brainard Plain Mill.

1 No. 4 Schenckers Double-Head Bolt Cutter.

12" Pratt & Whitney Cutting-Off Machine.

12" Lowell Machine Co.'s Slotter.

Double-Head Pratt & Whitney Horizontal Boring Mill.

Cold Saw, 18" Blade, Pump and Pan.

20" Springfield Knife Grinder.

Wells Bros. Cutter and Reamer Grinder.

Springfield Tool Grinder, 36" Wheel, with pump.

2 Speed Lathe.

4 36 H. P. Portable Boilers.

1 Blacksmith Bellows.

Also a complete line of new machines. Correspondence solicited.

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I HAVE FOR SALE FOR IMMEDIATE DELIVERY a Baldwin, standard gauge, 25-ton, 4-wheel, Switcher and Tender, with cylinders 14 in. x 22 in., drivers 43 in. centers, wheel base 7 ft., steam brake, automatic couplers. Price \$2,400. Can show engine in service here and recommend its condition.

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 Good Second-Hand Engines.  
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WE SELL

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#### Davis Calyx Drill,

Class F, with appurtenances and 10 H. P. locomotive type Boiler on wheels, to run drill.

This drill has a capacity of 600 feet, and bores a 4" hole, 3" core, 306 feet of drill rods with drill. Also, 181 feet of 5" extra black pipe for casing, with drive head and shoe. Has been in use about ten months, with best of care. This drill is used for exploiting for minerals, and for driven wells. This drill is very complete in all its appurtenances.

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Fifty Whitin Welman Top Flat Cards, with 40 tops 40 ins. wide. Cylinder 42 x 40 ins. Doffer 40x18 ins. Floor space 8 ft. 2 ins. x 5 ft. 2 ins., with coilers. Production 125 lbs. per day. Some of these cards are only 3 years old, balance 8 years. They can be seen running. Also 150 sets Steel Clothing in extra good condition; 100 Doffers; 150 Mason Looms, 44"; 10 Ashworth Revolving Top Cards. For full information and price apply to

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### For Sale—ENGINES.

14"x24" Cooper automatic \$400; 14"x20" \$300; 12 1/2"x24" \$175; 12"x16" 11"x16" center crank, two 14"x8" \$25; Porter-Allen automatic \$50 each; Vertical engine 6"x8" \$55; 6"x10" \$55; One hundred horse power tubular boiler \$400; Six 70 H. P. tubular boilers \$300 each; One new 65 H. P. Scotch boiler \$150; One new 25 horse Scotch boiler \$100; One 35 H. P. portable boiler \$300; Forty, Forty-five, Fifty and Sixty horse tubular boilers; Ten vertical boilers; Fire engine, Cole Bros. make, \$300; Thirteen horse Russell traction almost new \$300; Two 12 horse tractions \$250 each; Ten horse portable engine on wheels \$25; Seven sawmills; One 49" Stedman disintegrator with rolls and screens \$300; One B. & W. 400 H. P. boiler \$1200; One planer, N. Y. Steam Engine Co. make, 30"x20"x35"; New boilers and engines all sizes.

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125 " N. Y. Safety..... 680

175 " Corliss..... 950

DYNAMOS—120 lights Edison..... 138

150 " Onondaga..... 148

200 " Mather..... 160

270 " Edison..... 190

510 " Edison..... 298

1000 " Edison..... 540

AMERICAN ELECTRIC SUPPLY & MFG. CO.

27 Thames St., New York City.

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Five Blowing Engines.

36" Steam Cylinder, 84" Air Cylinder, 34" Stroke.

Engines were built by Cuyahoga Engine Works and can be seen in operation at our plant at Columbus, Ohio. Can be delivered about Jan. 1st.

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### FOR SALE.

One only 60 horse power Westinghouse engine, weighing 7,450 pounds; space—Length,

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### FOR SALE.

1 18x49" Left Hand Harris Corliss Engine. Thoroughly Repaired. GUARANTEED good as new.

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#### Iron Tools and Woodworking Machinery</h4

# Machine Tools AND Iron Works Machinery.

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10" Alligator, belt driven.  
12" Alligator, belt driven.  
22" Vertical, bar belt driven.  
21" Vertical, double end, belt driven.  
124" Bertsch sheet, steam driven.  
Hot Bloom Shear, steam driven.  
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60-lb. Hackney Air Cushion, belt driven.  
75-lb. Phillips & Justice, belt driven.  
100-lb. Williams & White, belt driven.  
100-lb. Merrill Drop Hammer.  
5000-lb. Pittsburgh Steam Hammer.

## PIPE CUTTERS.

1 1/4 to 2" Saunders Pipe Machine, belt driven.  
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## DRILLS.

20" Silvers, power feed.  
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28" Back Geared, hand feed.  
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Also Lathes, Planers, Punches, Presses, Engines, Boilers and Rolling Mill Machinery.

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Several Hundred Tons of  
1/4 inch

## Open-Hearth Tank Plate

63 x 156-inch.

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Your orders solicited for any material produced in Pittsburgh District.

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12 lb. to 40 lb. per yard and Splices. New Heavy Sections to 8 lb. Narrow Gauge Railway Equipment. Cars, Locomotives, Switches, etc.

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One 14-ton Baldwin, rear tank, standard gage. One 8-ton 7x12 Porter & D Saddle Tank, 42" gage. One 17-ton Climax Geared, 36" gage. Five Climax logging cars, 36" gage. Steam shovels, hoisting engines, etc.

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Two 70 H. P. Hor. Return Tubular. Two 65 H. P. Locomotive. One 25 H. P. Locomotive. One 25 H. P. Vertical. One 20 H. P. Vertical. One 10 H. P. Vertical.

## Engines.

One 7x8 Vertical. One 10x12 Horizontal. One 12x24 Horizontal. One 12x28 Horizontal. One 14x24 Horizontal. One 18x24 Horizontal. One 10x12 "Buckeye" Automatic. One 13x15 "Idle" Automatic. One 15x18 "Idle" Automatic. Two 10x12 "Ball" Automatic.

Also a lot of Pumps, Hoisting Engines, Motors, Rails, Pipe, Wood Working Machinery, Shafting, Hangers, Wood and Iron Pulleys.

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Immediate delivery at an attractive price.

## 48-in. Riveted Steel Pipe

1/4 and 3/8 inch in thickness.

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Ready for Immediate Delivery.  
Excellent Condition.

4 3/4" Gauge, Forney Type, Cylinders  
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Suitable for Logging Roads, Contractors, Switching, &c.

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Steel Rails, Cars, Locomotives, R. R. Supplies.

## Alabama Frog & Switch Co.

ANNISTON, ALA.

Manufacturers of

## Railroad Crossings, Frogs, Switches, Switch Stands, Rail Braces, Etc.

## FOR SALE.

1 Locomotive, 36" gauge, 11x16, 15-ton capacity. 9 Box Cars, 54" long, 60,000 lbs. capacity. 30 Box Cars, 30' long, 40,000 lbs. capacity. 200 tons 56-lb. Steel Relayers. 150 tons 60-lb. Steel Relayers. Also New Rails, 8 to 40 lbs.

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An almost new Sullivan "Bravo" Diamond Core Drill, with complete equipments and with horse power attachment. Has been used 90 days only and is in perfect repair; also one complete set of tools to go with same. For further information and price, address

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Head Office and Plant: Main & North Market Sts.  
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ST. LOUIS, MO.

Correspondence Solicited.

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1000 tons 40-lb. Steel Relaying Rails and Splices. 1500 tons 56-lb. Steel Relaying Rails and Splices. 1000 tons 60-lb. Steel Relaying Rails and Splices. 500 tons 63-lb. Steel Relaying Rails and Splices. For Prompt Shipment.

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Two hundred and fifty tons of new forties; two hundred and fifty tons new thirties; one 16" cyl. Roger Locomotive, good condition; one 15" cyl. Baldwin Locomotive, good condition; one 15-ton stand. gauge locomotive, for wood or iron rails; two 25-ton 14" cyl. stand. gauge locomotive, fine condition. Apply

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## In Stock. Immediate Delivery. Rebuilt and Guaranteed.

20" x 40" x 80" Cross-Compound Corliss.

22" x 60" Wetherill Corliss.

26" x 60" Wetherill Corliss.

21" x 42" Rickards Corliss.

20" x 48" Frick Corliss.

20" x 42" Slater Automatic.

22" x 32" Watertown.

18" x 24" New York Safety Vertical.

16" x 27" x 16" Westinghouse Compound.

14" x 24" Westinghouse Compound.

12" x 22" x 20" Porter-Allen Automatic.

3 12" x 20" x 12" Westinghouse Compounds.

16" x 36" Wetherill Corliss.

18" x 42" Harris Corliss.

16" x 16" Green Automatic.

15" x 16" Armstrong & Sims.

14" x 15" McIntosh & Seymour.

13" x 12" Armstrong & Sims.

12" x 14" Vertical Fitchburg Automatic.

12" x 12" Buckeye Automatic.

12" x 15" Ide Automatic.

12" x 12" Armstrong & Sims.

11" x 15" Atlas Automatic.

11" x 12" Chandler & Taylor Automatic.

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10" x 15" Atlas Automatic.

3 75 H. P. Westinghouse Standard Automatics.

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And many others. Stock is constantly changing. Let me have a list of your wants.

## BOILERS.

2 66" x 18" Horizontal Tubulars, 125 lbs. Steam.

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2 150 H. P. Wood Water Tube, practically new.

Large stock of new and second-hand Horizontal, Vertical and Locomotive Boilers.

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60 large Steam Pumps, up to 12" suction, assorted sizes.

50 H. P. Otto Gas Engine.

40 H. P. Otto Gas Engine.

Large Stock of Dynamos, Iron and Wood Working Machinery. Send for Special Catalogue of 2000 Pieces.

## FRANK TOOMEY,

127-131 N. Third St. Philadelphia, Pa.

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One 18x42 Harris-Corliss Engine.

One 16x20 S. C. Washington Iron Works' Engine self-contained.

One 13x22 S. C. Cardwell Engine.

One 11x18 S. C. Talbot Engine, Box-bed.

One 14x16 S. C. Engine.

One 11x15 Richmond Locomotive Works' S. C.

One 11x14 A. & C. C. C. Engine.

One 7x8 Vertical Engine.

One 6 H. P. Vertical Engine.

One 20 H. P. Farquhar Traction Engine.

One 15 H. P. Aultman & Taylor Traction Engine.

One 12 H. P. Birdsall Traction Engine.

One 10 H. P. Frick Engine and Boiler mounted on wheels.

## BOILERS.

One 80 H. P. High-Pressure R. T. Boiler, good for 120 lbs. steam working pressure.

One 80 H. P. R. T. Boiler.

One 70 H. P. R. T. Boiler.

One 60 H. P. R. T. Boiler, Half-Frost.

One 50 H. P. R. T. Boiler, Full-Frost.

One 50 H. P. Economic Boiler.

One 40 H. P. Economic Boiler.

One 40 H. P. R. T. Boiler, Half-Frost.

One 25 H. P. R. T. Boiler, Half-Frost.

One 20 H. P. R. T. Boiler, Half-Frost.

One 15 H. P. Locomotive Type Boiler on wheels.

One 30 H. P. Vertical, and several smaller sizes.

Also several sizes of pumps and other machinery.

The above are in A-1 condition. Write for particulars.

**JNO. A. WATERS & CO., Richmond, Va.**

## LOCOMOTIVES.

50-ton Freight and Switch Engines for prompt delivery.

## RAILS AND CARS.

## MAY & SPALDING,

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713 Traction Bldg., CINCINNATI, O.

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ATLANTA, GA.

## IRON BROKERS.

And dealers in New and Second-hand Machinery. Also carry in stock Hoisting Outfits and Light Section Rail for contractors' use.

## FOR SALE.

**Drain or Culvert Pipe.**

125 lengths of 20" Cast Iron Pipe, practically as good as new, at Charleston, S. C.

## FRANK SAMUEL,

Harrison Building, PHILADELPHIA, PA.

# FOR SALE.

## Immediate Delivery.

### AIR COMPRESSORS.

Two Rand Straight Line, "Class C," 10" x 18" x 34"; One Ingersoll-Sergeant, "Class G," Duplex, 20" x 30" x 24".

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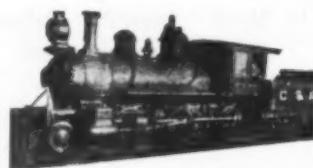
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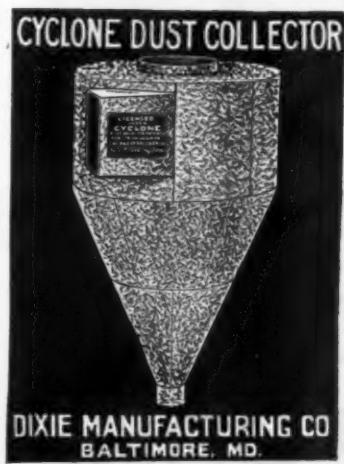
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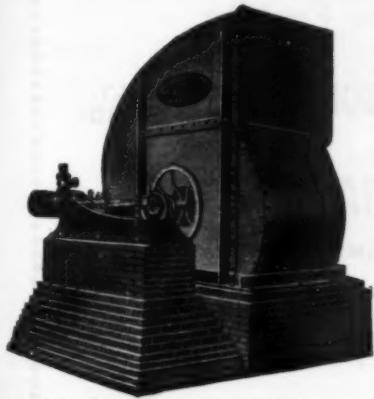
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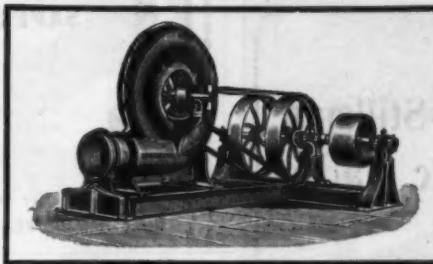
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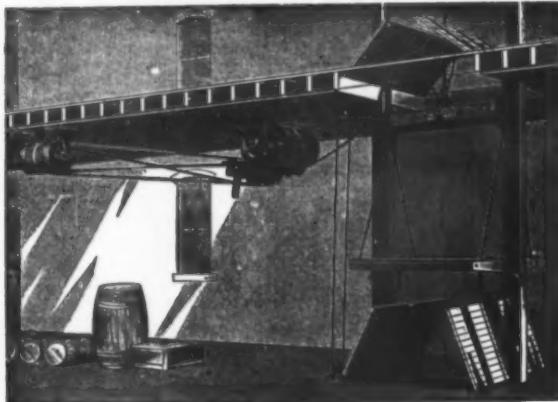
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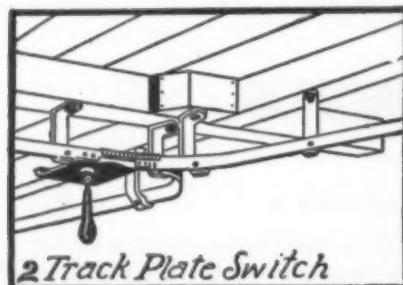
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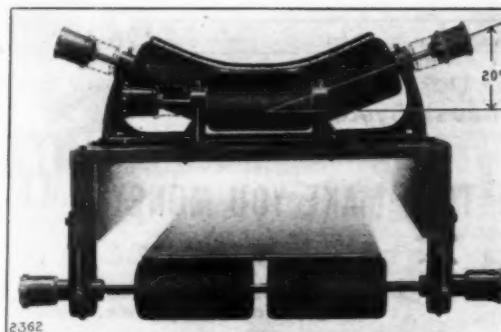
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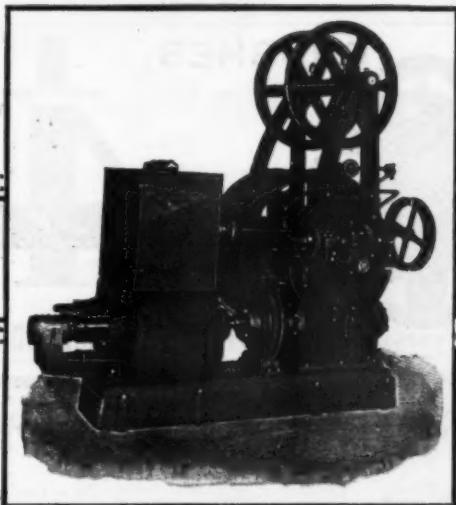
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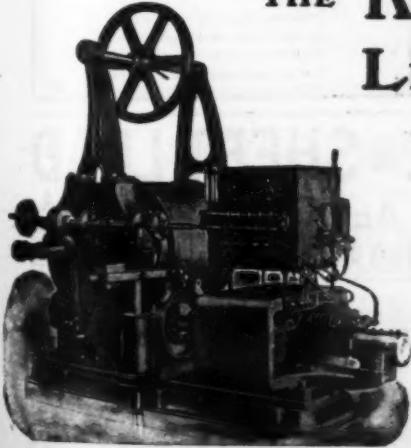
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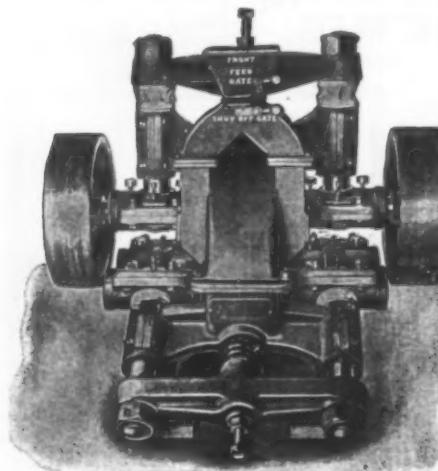
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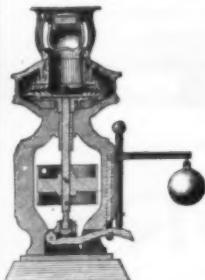
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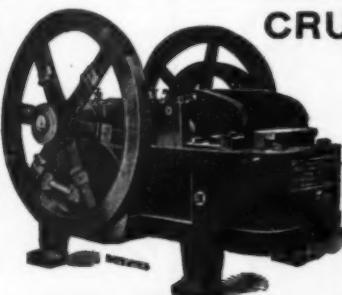
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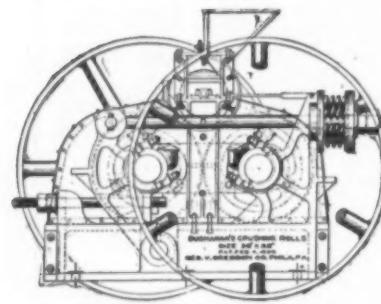


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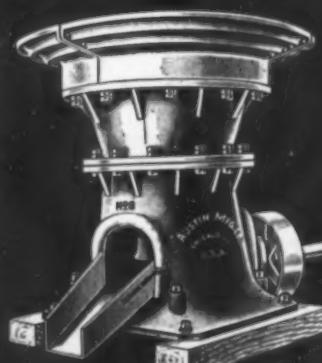
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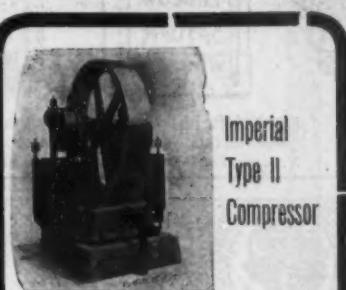
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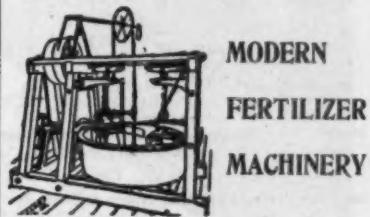
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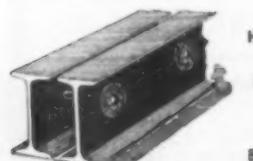
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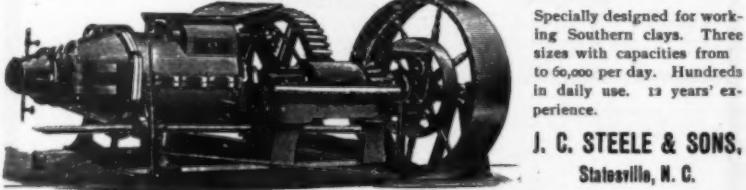
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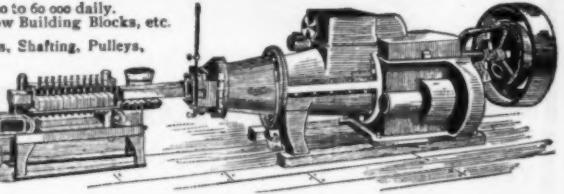
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9-in.....	21 "
9-in.....	25 "
10-in.....	25 "
10-in.....	30 "
12-in.....	31 $\frac{1}{2}$ "
12-in.....	40 "
15-in.....	42 "
15-in.....	50 "
18-in.....	55 "
21-in.....	65 "
21-in.....	80 "

Angles—Even Legs (Continued)
4-in. x 4-in. x $\frac{1}{4}$ -in.
6-in. x 6-in. x $\frac{1}{4}$ -in.
6-in. x 6-in. x $\frac{1}{2}$ -in.
8-in. x 2 $\frac{1}{2}$ -in. x $\frac{1}{4}$ -in.
4-in. x 3-in. x $\frac{1}{4}$ -in.
4-in. x 3-in. x $\frac{1}{2}$ -in.
4-in. x 3-in. x $\frac{3}{4}$ -in.
5-in. x $\frac{3}{4}$ -in. x $\frac{1}{4}$ -in.
5-in. x $\frac{3}{4}$ -in. x $\frac{1}{2}$ -in.
6-in. x $\frac{3}{4}$ -in. x $\frac{1}{4}$ -in.
6-in. x $\frac{3}{4}$ -in. x $\frac{1}{2}$ -in.
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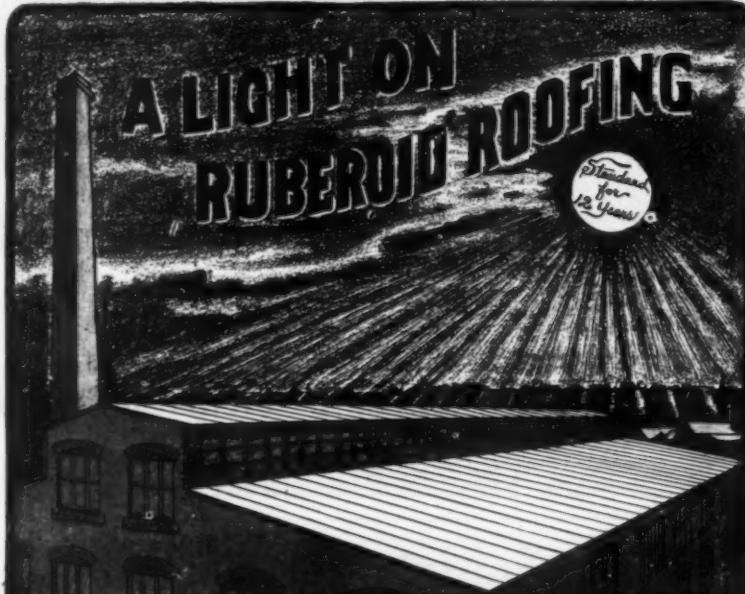
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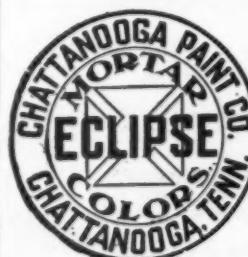


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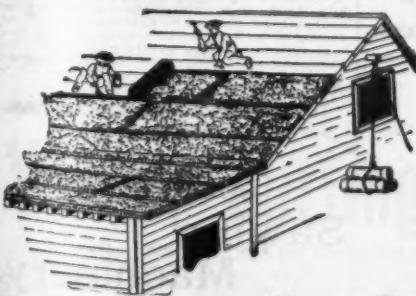
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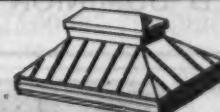
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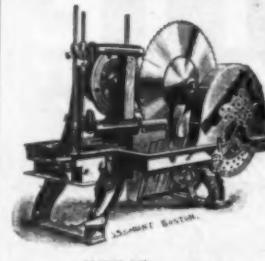
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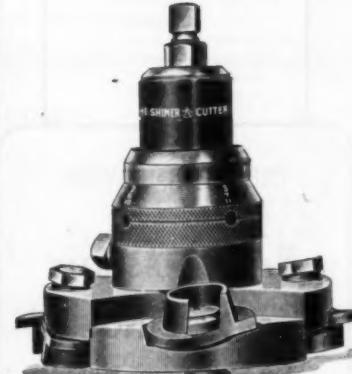
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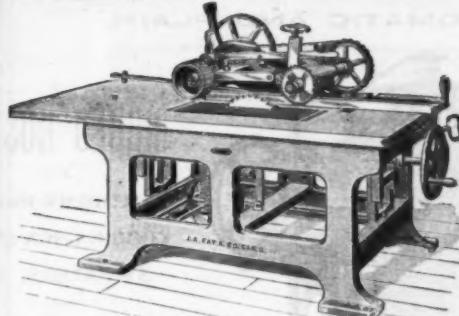
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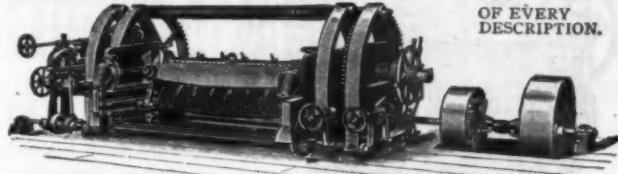
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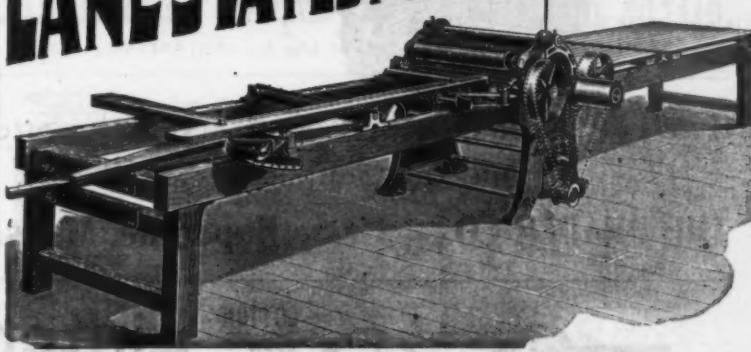
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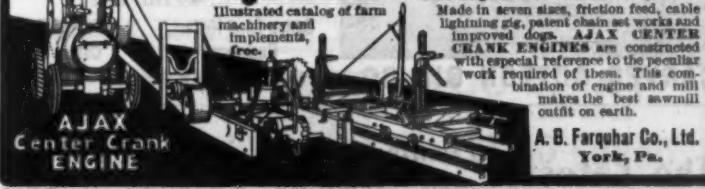
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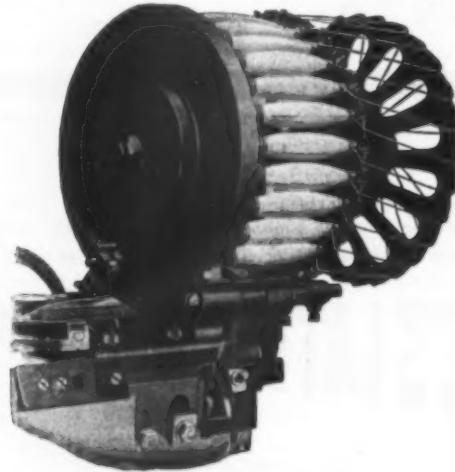
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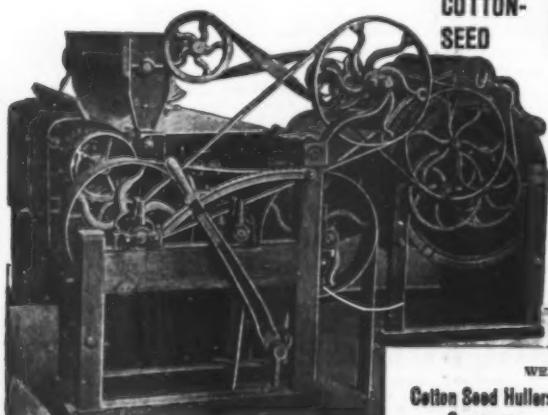
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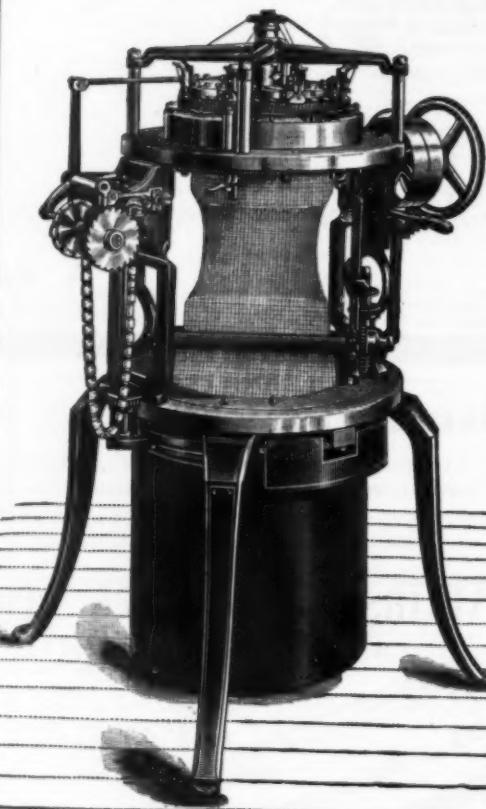
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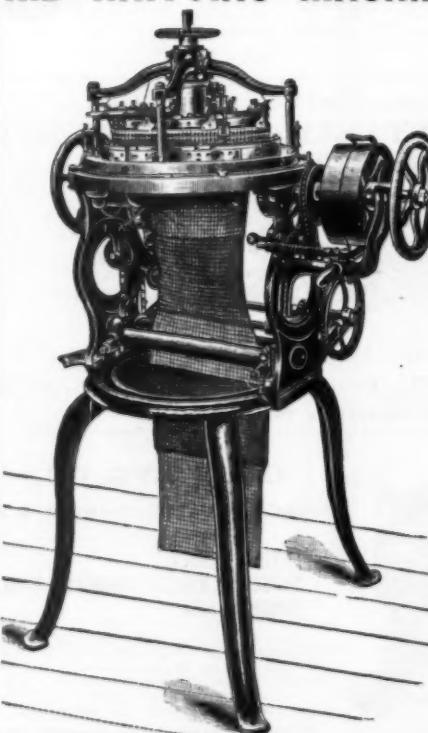
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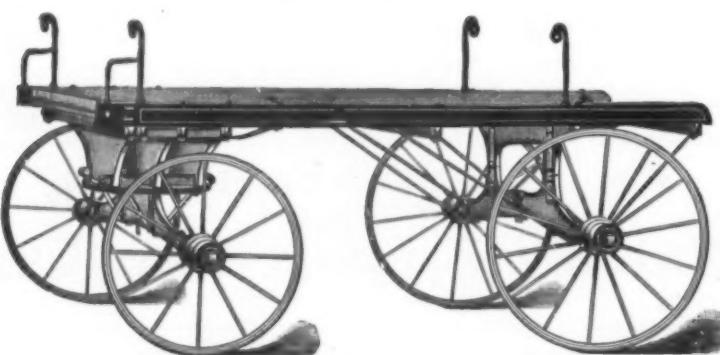
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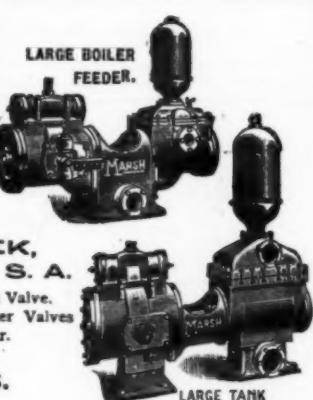


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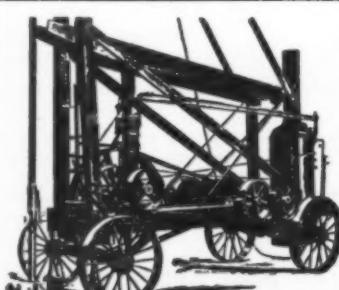
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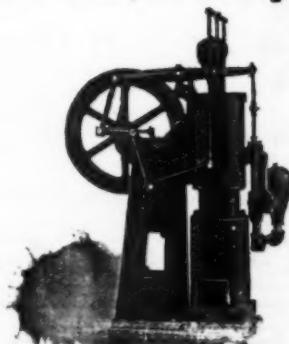
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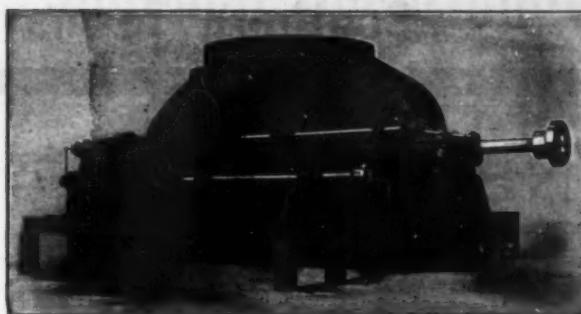
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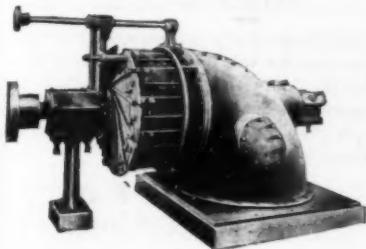
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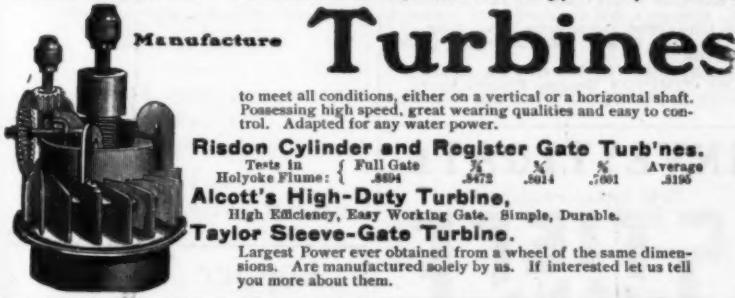


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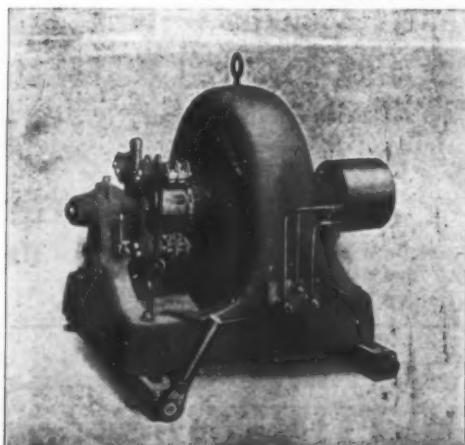
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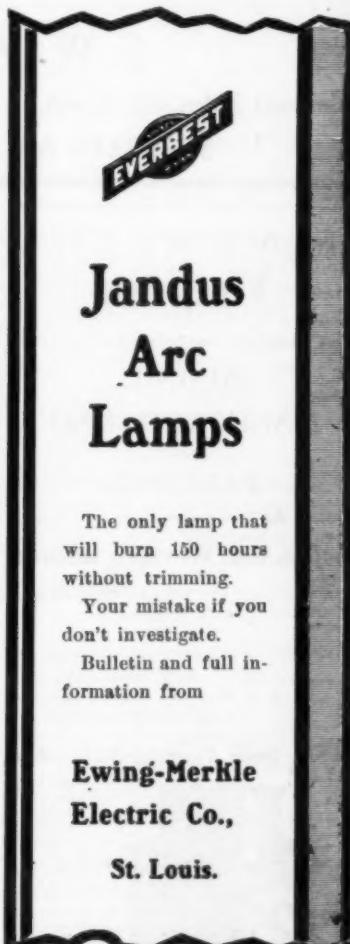


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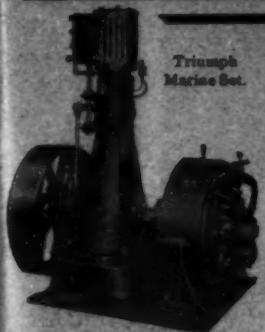
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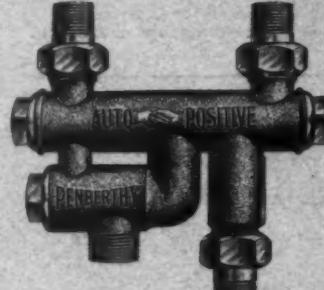


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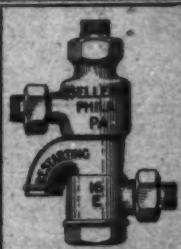
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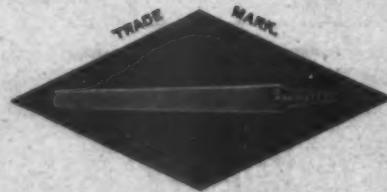
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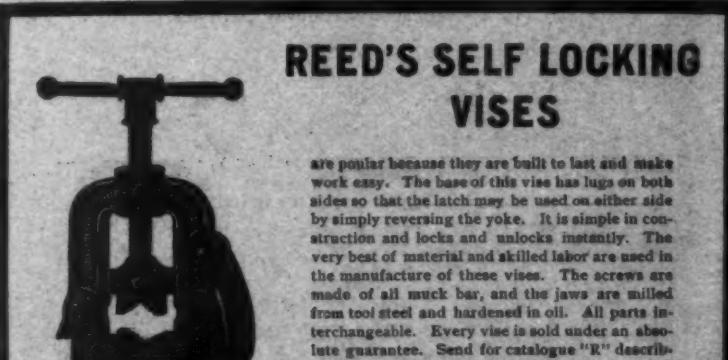
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